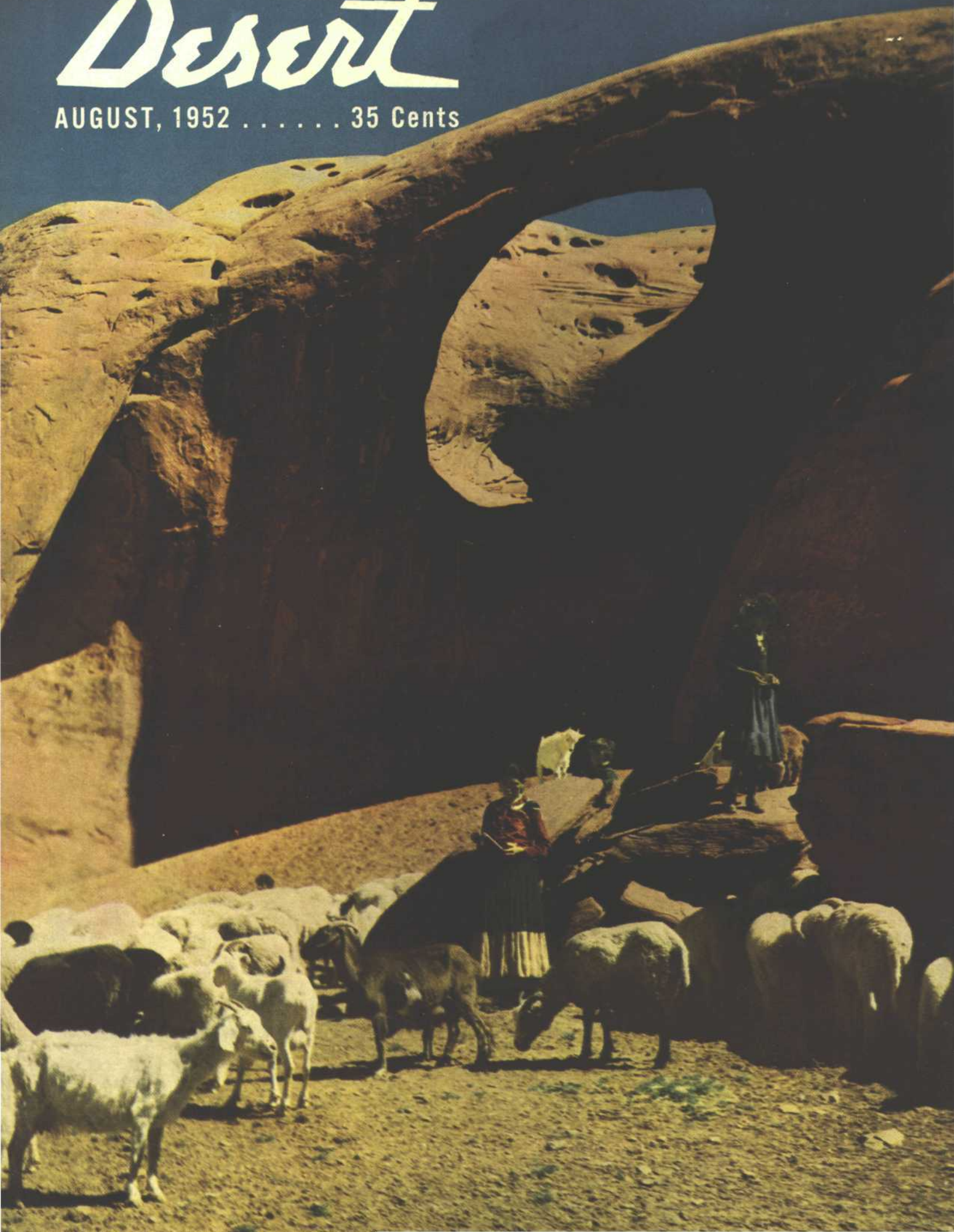


Desert

AUGUST, 1952 35 Cents



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Desert Close-ups

Winifred Randle Jones, author of "Black Agate in Milky Wash," began writing 15 years ago—as a cub reporter for the Twin Falls, Idaho, newspaper. It wasn't long, however, before she put down her copy pencil and again took up her school books to continue study at Brigham Young University in Provo, Utah.

At BYU, she met Stanley R. Jones, an avid rockhound, and they were married. With caring for a home and five active children, it wasn't until 11 years later that Mrs. Jones went back to her typewriter.

The return to writing paid off—first with "It's Got Me," the story of the effects of rockhounding which won a writing contest prize. Ever since, she has been writing for Sunday magazine sections and women's and children's magazines.

The Joneses are enthusiastic rockhounds. Last winter they joined courses in geology, gemology and lapidary, and every chance that comes along they are off on a field trip.

* * *

A native Californian, T. E. Jewell, whose prospecting experiences are told in this month's Life on the Desert contest story, was born in Happy Valley, now North Broadway, Los Angeles. While he was still a baby, his family moved to Downey, California, and it was here that he was raised and schooled.

"My first experience with the Colorado Desert was in 1918," Jewell writes. "For several weeks I drove a four-mule team hauling cement from Whitewater station (now Palm Springs station) to be used in constructing a diversion wall at the point where the Palm Springs highway passes through the cut and heads southeast toward the resort town."

He has spent about one fourth of the last 34 years in desert country—working on water well rigs, herding goats, picking dates, figs and grapes, irrigating fields, driving tractors and doing other jobs in the Coachella Valley area. He now is employed by Desert Steve Ragsdale as bookkeeper in his service and supply company in Desert Center, California. His wife, Frances, is head cashier.

The Jewells have five sons. The eldest is married and lives in Oregon; his nearest brother is a sergeant in the Air Force, stationed at Lake Charles, La. The younger three are not yet old enough to strike out for themselves, and they live with their parents in Desert Center.

* * *

Jack Breed, who photographed the Navajo shepherdesses in Monument Valley for this month's *Desert Magazine* cover, has traveled over a million miles photographing North America.

Jack was born a New England Yankee—in Swampscott, Massachusetts, June 3, 1917. He attended Belmont Hill School in Belmont, Massachusetts, preparatory to entering Harvard as a geology-geography major with sub-major emphasis on archeology and anthropology. He entered World War II as a photographic officer in the navy and served as aide and flag lieutenant to Vice Admiral John H. Hoover throughout the Central Pacific campaign.

Jack started coming west in 1933, when he was 15, "to catch snakes and see the wonders." He has been doing just that ever since—traveling, photographing, writing and catching anything that crawls.

Mrs. Breed had never been west of Pittsburgh until she met Jack. They have three children, ages 4, 2 and 5 months, and live in a New England farmhouse built 200 years ago in West Boxford, Massachusetts, with 13 rooms, 50 acres, one dog, three cats and four turtles. Jack also has studios in Whitefield, New Hampshire, and Tucson, Arizona.

DESERT CALENDAR

- August 1-3 — Annual Cowboys' Reunion Rodeo, Las Vegas, New Mexico.
- August 2—Old Pecos Dance, Jemez Indian Pueblo, New Mexico.
- August 2-3 — Desert Peaks Section, Southern California and San Diego Chapters, Sierra Club, climb to Temple Crag in Southern California.
- August 4—Corn Dance and Fiesta, Santo Domingo Pueblo, New Mexico.
- August 7-10—31st Annual Inter-Tribal Indian Ceremonial, Gallup, New Mexico.
- August 8-9 — Northern Arizona Square Dance Festival, Flagstaff, Arizona.
- August 8-10—Pecos Valley Horsemen Annual Show, New Mexico Military Institute, Roswell, New Mexico.
- August 9—Smoki Snake Dance, Prescott, Arizona. At sundown.
- August 10 — Feast Day of San Lorenzo at Picuris Pueblo, 28 miles from Taos, New Mexico.
- August 10—Annual Fiesta and Summer Corn Dance, Penasco, near Taos, New Mexico.
- August 12 — Annual Fiesta, Santa Clara Pueblo, New Mexico.
- August 15—Assumption Day Fiesta and ceremonial dance, Zia Pueblo, New Mexico.
- August 15-17—Quay County Sheriff's Posse Rodeo, Tucumcari, New Mexico.
- August 15-17—Fifth Annual Tesuque Valley Horse Show, Santa Fe, New Mexico.
- August 22—San Augustin Fiesta and dance, Isleta Pueblo, New Mexico.
- August 26—Opening of second annual New Mexico Hereford Association Ranch Tour, Roy, New Mexico.
- August 29-September 1—Annual Fiesta, Santa Fe, New Mexico.
- August 30-September 1—Desert Peaks Section, Southern California Chapter, Sierra Club, hike up the Thumb, Sierra peak in Southern California.
- August 30 — Second Annual Palm Wells Cactus Day, Morongo Valley, California.
- August 31-September 1 — World Championship Steer Roping, Clovis, New Mexico.



Volume 15

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Truth Must Prevail

By TANYA SOUTH

Truth must prevail! Whate'er we do,
Howe'er we live each life anew,
In time Truth must prevail. And we
Shall by it fall ignominiously,
Or rise magnificent, to power
At the appointed hour.



Death Valley's great salt sink, from Dante's View. Photo by John L. Blackford.

They've Tried to Tame Death Valley

By RANDALL HENDERSON

LURKING BEHIND the rocky parapets of the Amargosa and Panamint Ranges in desert California and Nevada, Shoshonean Indians watched a strange caravan invade their ancestral homeland in the late fall and winter of 1849.

These Indians never before had seen men with fair skins and beards, nor oxen and wheeled vehicles. Here was a band of human beings from another world—and from their hiding places overlooking the route, the Indians

watched from day to day as the invaders in straggling groups moved slowly across the ranges and valleys of this region, their progress always westward.

More than 100 years have passed since those '49ers of the California gold rush days—William Lewis Manly, the Asabel Bennett family, the J. B. Arcane family, the Briers, the Jayhawkers, the Georgians, the Mississippi Boys and others—came this way.

Not all of them survived. So tragic

To the Shoshone Indians Death Valley was home. To the '49ers it was a place of tragedy. To the hard-bitten prospectors of later years it was a source of mineral wealth, to be gotten only by toil and hardship and pain. But today, a new generation of Americans has sought, with considerable success, to make it a mecca for winter tourists. Death Valley is still wild and mysterious and awe-inspiring. But it has been made accessible and safe even for a tenderfoot. Here is the story of the transformation which has taken place — and of the men who brought about these changes.

was the experience of those who did make it through this waterless region that they gave it a name which has remained to this day—Death Valley.

The descendents of those Shoshone

Indians still live in Death Valley. Some of them now have adobe houses, built by Uncle Sam. Others prefer the shelter of mesquite trees, and a cooking fire on the ground. They now wear clothes instead of wild animal skins.

During the century which has passed since the bearded ones blazed the first white man's trail across Death Valley, succeeding generations of these desert tribesmen have witnessed amazing changes in the landscape of the arid wilderness which was once their own hunting ground.

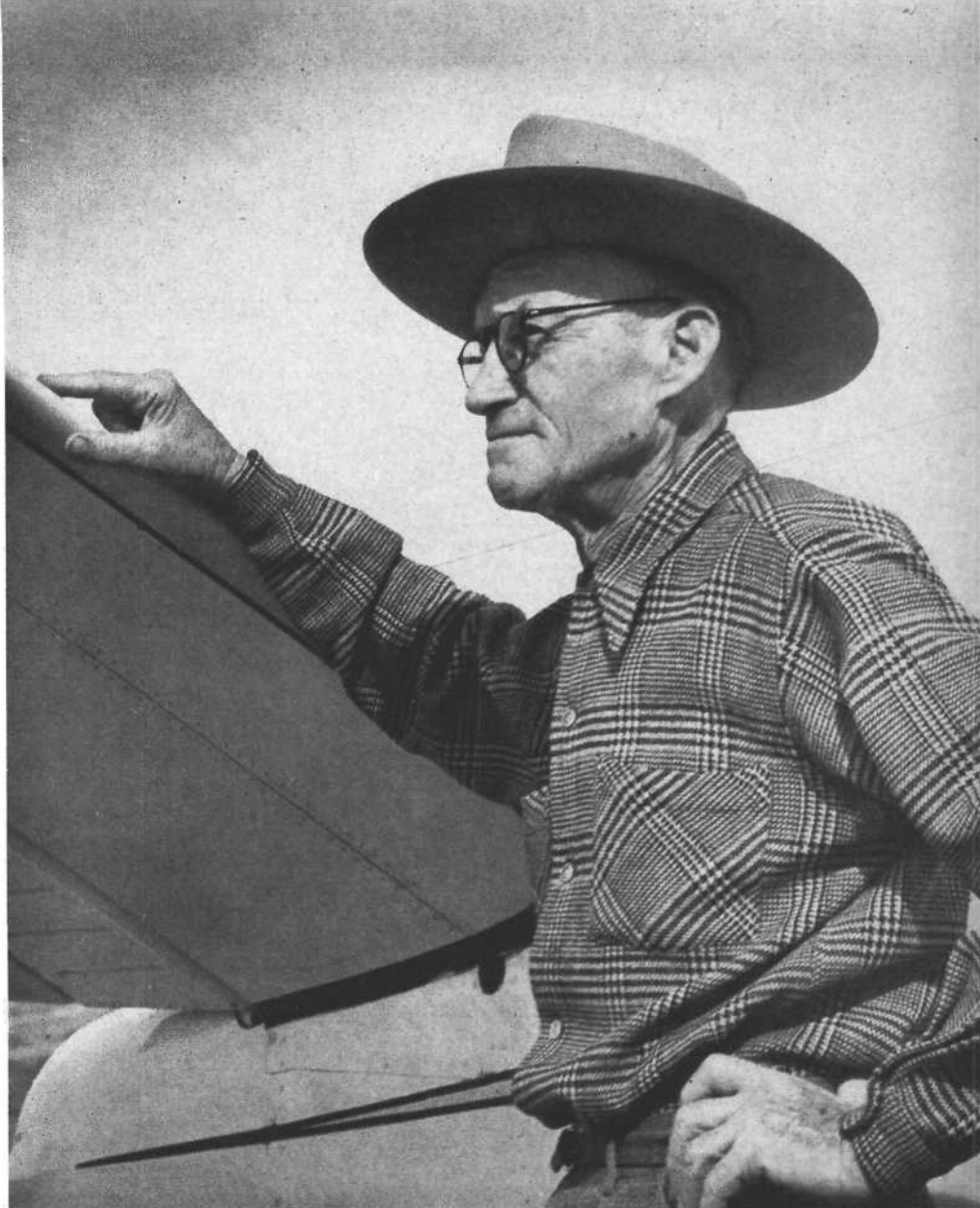
They have seen lone prospectors come and go. They have watched boom mining camps spring up almost overnight, and then fizzle out. They have watched the 20-mule team wagons of the borax industry, the road-builders, and the construction of Scotty's fantastic castle — and since 1949, an annual influx of more than 200,000 motorists.

Mining has brought intermittent strikes of wealth, and great numbers of people into the area. But the real pay-off for Death Valley has been tourists — and it is a harvest which promises to increase as the years roll by. Death Valley has become a mecca for winter visitors, thanks to the vision and initiative of a few men and the work of a great many.

Men of the Pacific Coast Borax company were first to envision the tourist possibilities of the region. At least they were the first to invest large sums of money in tourist accommodations at Furnace Creek, Ryan and Death Valley Junction. Also, they were among the most urgent advocates of a national park or monument in this region.

But even before the construction of Furnace Creek Inn had been started, Walter Scott and Albert M. Johnson had begun the building of that architectural fantasy—Scotty's Castle—and H. W. Eichbaum was building a toll road into the Valley by way of Towne's pass, to be followed by the erection of the Stove Pipe Well hotel.

But the push which finally put Death Valley on the tourist map came from another group of men—in the service of Uncle Sam: Stephen T. Mather, first director of the National Park Service; Horace M. Albright, Mather's assistant and later director of the National Parks; President Herbert Hoover, who in 1930 withdrew the Death Valley region for consideration as a National Monument, and later on February 11, 1933, as one of his last acts in the White House, established the Monument; Conrad Wirth, now director of the National Park service, who as chief of CCC operations in the National Parks and Monuments



Ray Goodwin—Superintendent of Death Valley National Monument.
Photo by Don Downie.

from 1934 to 1942 was responsible for much of the initial construction work in the Monument; and Ray Goodwin, who for 19 years has been the man on the job—first as construction engineer, and since 1938 as superintendent of the Monument.

The role played by Theodore Raymond Goodwin was not the most important in the establishing of the Monument originally, but no man has put more of himself into the development of Death Valley as a winter playground for Americans than has this wiry Yankee from New England. The story of the transformation which men and tools have wrought in Death Valley during the last quarter of a century is inseparably linked with the energy and enthusiasm of Ray Goodwin, and of his wife Neva.

Born in Norwich, Connecticut, September 26, 1887, Ray tried his hand at many things before he finally at the age of 45 found his niche in the most desolate desert in North America.

A descendent of sea-faring people,

he had been a yachtsman, boat-builder, musical instrument and farm implement salesman, concert promoter and farmer. In 1911 he sailed across the Atlantic in a 21-foot yacht skippered by Thomas Fleming Day, editor of *Yachting Magazine*. They spanned the ocean from Narragansett Bay to Gibraltar in 33 days, and then went on to the Italian International Exposition at Rome, returning home by liner.

An important turning point in his life came in 1915 when a friend returned from Yuma, Arizona, where he had regained his health and had become enthusiastic over the farming possibilities in Yuma Valley. Ray was so impressed that he sold his music store at Providence, Rhode Island, and bought a ticket for Arizona.

He worked for the Reclamation Bureau a few months, then bought a ranch for his Providence friend. For five years he alternately worked for the Reclamation office and farmed. In 1921, with 640 acres of Pima long staple cotton planted on the Yuma



reservation near Winterhaven, California, the price of cotton dropped from over a dollar a pound to a few cents.

That ended his farming career. He took a job as assistant county engineer for the Yuma County Highway commission. That was during the period when Dick Wick Hall, Arizona's writer-humorist, was devoting most of the space in his weekly mimeographed *Salome Sun* to lambasting the Yuma road commissioners for their neglect of the northern Yuma County roads. But it wasn't Ray's fault. He merely was one of the hired men.

In 1923 the California Highway commission was preparing to extend U. S. Highway 80 across the Algodones sand dunes to replace the plank road which for many years had been part of the connecting link between El Centro and Yuma.

While not a trained road engineer, Ray had learned much about the building of desert roads during his service in Yuma County, and when the California department offered him a job as resident engineer in eastern Imperial County he accepted.

It was while working on Imperial County roads that he began experimenting with a new type of construction called "road mix" or "desert mix." It consisted in working certain special grades of oil into the native sand or soil, and then rolling it to a hard surface. It was low cost construction, and the big oil companies were helping develop the process. Ray admits that it was quite by accident that he discovered a formula which worked well on a span of road in Imperial County.

In 1926 the California Highway department sent him to Newberry as superintendent of construction on a sector of Highway 66. There he continued his experiments with desert mix roads.

He came across a copy of Manly's *Death Valley in '49*, and became interested in the northern Mojave desert area. At first opportunity he drove to Death Valley and was fascinated by



Top—The 20-mule team made famous by the Pacific Coast Borax company. Picture taken on the Devil's Golf Course in 1930. Frashers photo.

Middle—In the days when Furnace Creek Ranch conducted sight-seeing tours of Death Valley in a buckboard. Frashers photo.

Bottom—Original Stove Pipe Well—as it was in the late '20s. Once a waterhole for the prospectors, it is no longer in use. Frashers photo.

what he saw there. Many other trips into the region followed.

One evening at the Barstow Harvey House where he often ate his dinners, he met Stephen T. Mather, first director of the National Park Service, and during the conversation asked if it would not be feasible to include Death Valley in the national park system.

"But it is hot as blazes up there," Mather replied.

"Its winter climate is the finest in the land," said Goodwin. "All your other parks are for summer vacationists—Yellowstone, Crater Lake, Grand Canyon and Yosemite. Why not have a winter park to provide year-around recreation facilities for motorists?"

Mather did not live to see the Death Valley Monument established, but the seed sown by Pacific Coast Borax men, the Union Pacific—and by Ray Goodwin—eventually bore fruit.

In Barstow Goodwin met Neva Long, and after a few months they were married. She visited Death Valley with him and shared his enthusiasm for the region. Today they have two children, Ted Goodwin, a cadet in the U. S. Military Academy at West Point, and Katherine Martin, whose husband is a member of the U. S. Air Corps.

Ray had become a recognized authority on desert mix roads, and when the National Park Service asked the California Highway department for the loan of a construction man to help build low cost roads at Crater Lake and Yellowstone parks, Ray was assigned to temporary duty in the parks.

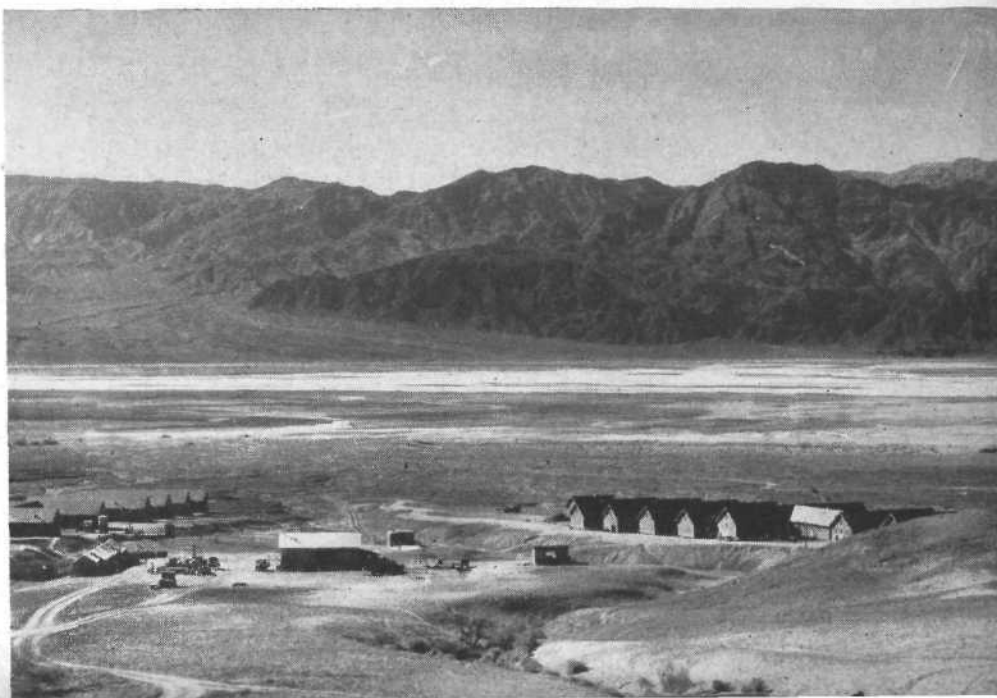
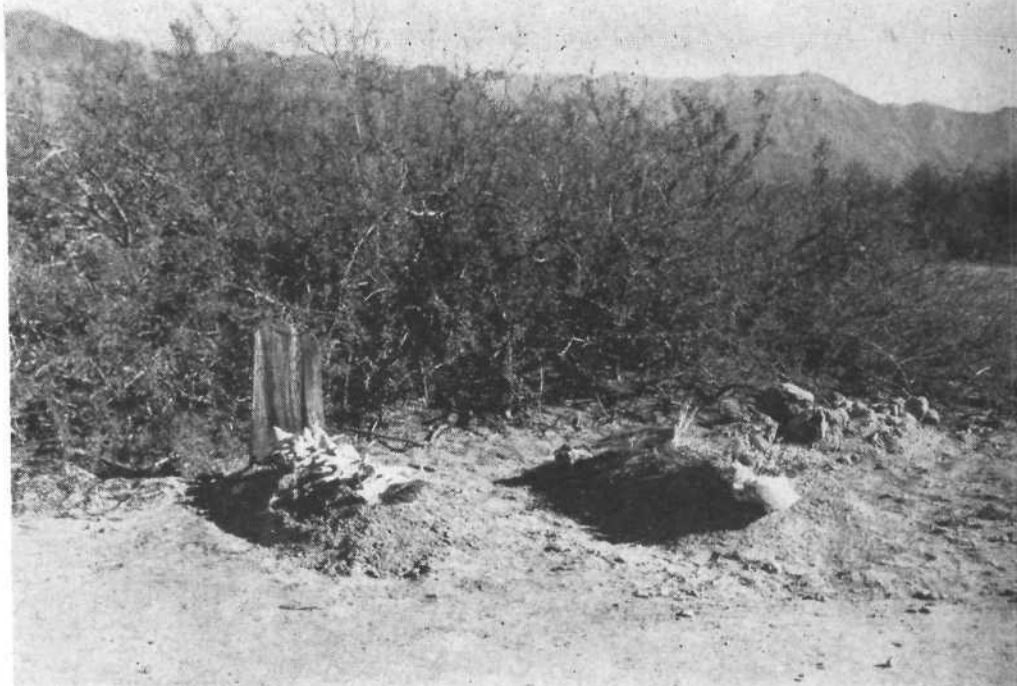
While on that assignment he met Horace M. Albright, who had succeeded Stephen T. Mather as director of the National Park Service, and Frank Kittridge, Park Service engineer.

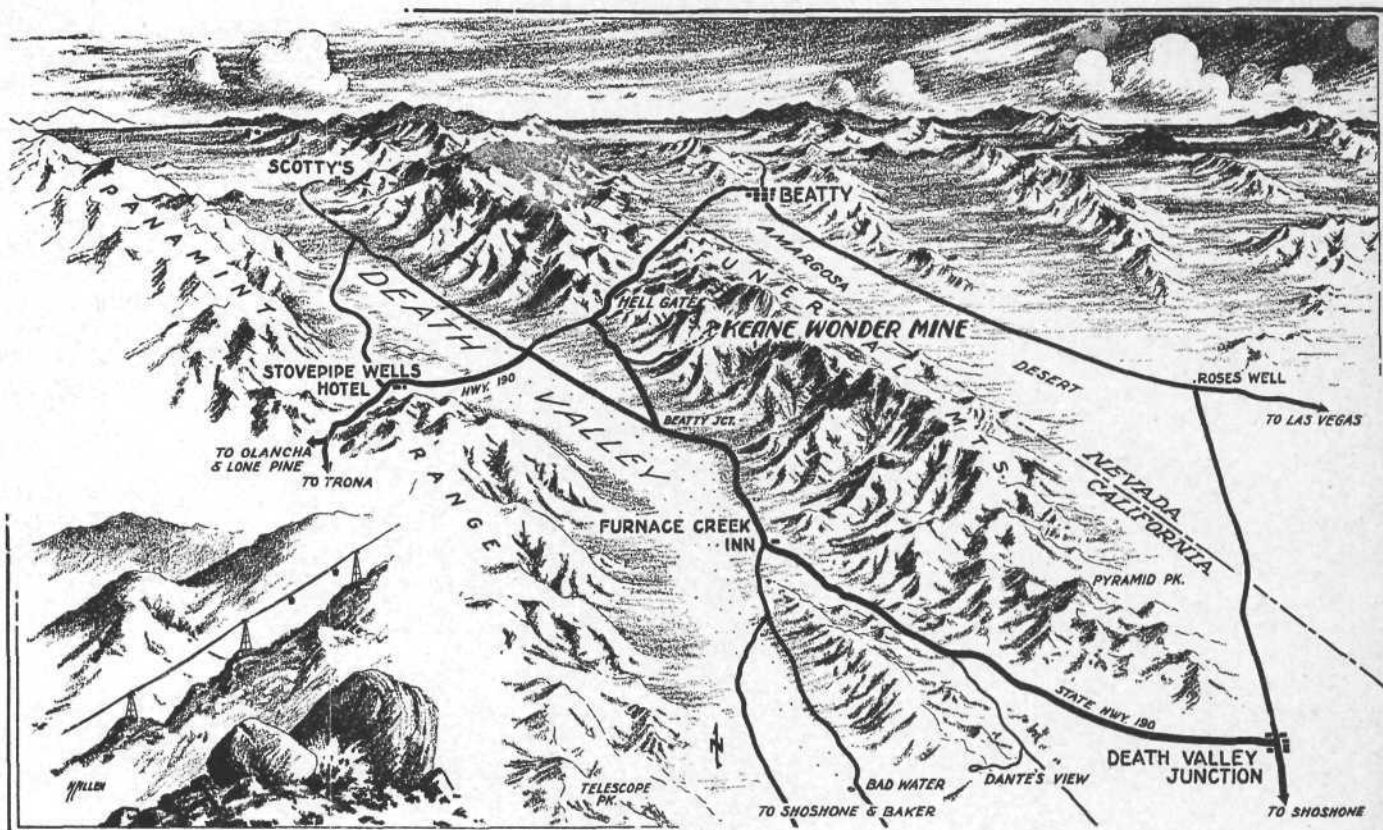
In 1930 Kittridge offered him a job as roving construction superintendent in western parks and monuments. He had assignments at many places, including Sequoia, Yosemite, Yellowstone and Casa Grande, Arizona. On July 25 that year President Hoover issued an executive order temporarily withdrawing from entry approximately

Top—Graves of Shorty Harris and Jim Dayton, prospectors. More recently a monument has been built at the head of these graves. Frashers photo.

Middle — Park Service and CCC supervisors who were building Death Valley roads and trails in 1934. Frashers photo.

Bottom—CCC camp on Cow Creek in 1934. Many of these buildings are still standing and are being used for storage. Frashers photo.





two million acres in Death Valley pending classification to determine the advisability of giving portions of it national monument status.

Ray Goodwin made known to his superiors that if the Death Valley National Monument was established, he would be interested in an assignment there.

Then, early in 1933, just before his retirement from office, President Hoover established the Death Valley National Monument covering an area of nearly 2500 square miles. It is the second largest area in United States administered by the National Park Service.

In 1937, on the initiative of Nevada congressmen, approximately 300,000 acres of Nevada terrain were added to the monument. However, it became apparent later that much of the added area had greater value for grazing purposes than for recreational use, and a movement is now in progress at Washington to return about 200,000 acres to the public domain, leaving the Monument a 4-mile strip on the Nevada side of the state line.

After the withdrawal order had been issued in 1930, it was discovered that while Albert M. Johnson and Death Valley Scotty had been spending hundreds of thousands of dollars in the building of their castle, they had neglected to get title to the land.

Johnson hurried to Washington to see what could be done about it. Horace M. Albright suggested that John-

son and Scotty have their site surveyed, and he would see what could be done about revising the order. Then Johnson found himself in a new quandary. If the land on which the Castle was being built should be returned to the public domain, any war service veteran would have a preference right to file on it.

When this situation came to light, Albright gave Johnson the promise that if the Monument was established he would ask congress for legislation permitting the owners of the Castle to buy the site. Albright made good his promise and after the Monument was formed he had introduced at the next session of congress a bill authorizing sale of the land to Johnson and Scotty. The bill passed both houses of congress, but was vetoed by President Roosevelt on recommendation of Secretary Harold Ickes, on the ground that the act as worded did not provide adequate protection for the Monument. Another bill was passed and signed, providing that if Johnson and Scotty offered the Castle site for sale, the federal government would be given first option to buy it. The measure also contained some stipulations which would forever bar it from degenerating into a honky-tonk retreat. The Castle site, including Scotty's hide-away cabin a mile and a half away, consists of 1270 acres, and valuable water rights.

H. W. Eichbaum, who had held a concession from the Wrigley interests on Catalina island before coming to

Death Valley, also found himself in difficulty when the withdrawal order was issued in 1930. According to the story told today, he had mistaken the stump of an old telephone pole for a government section corner, and later decided he had built his hotel on a section of land adjoining the one he owned. He arranged to trade sections, and after the deal was completed found he had been right in the first place. It became necessary to get a special act through congress to clear up the title—and is said to have cost \$4000 in surveys and legal fees to straighten out the dilemma.

Pacific Coast Borax company has title to approximately 13,000 acres within the Monument, including the land where Furnace Creek Inn and Ranch are located, and numerous patented mining claims.

When the Death Valley Monument was formed, no federal funds were immediately available for either personnel or improvements. Col. John R. White, superintendent of Sequoia National Park, was assigned the responsibility for the new monument as an additional duty.

Later French Gilman, one of the Park Service's finest botanists, was sent in as resident custodian. Gilman immediately set up a little nursery for the propagation of desert plants, and began to extend the botanical check list which had been started by Dr. Colville during the Death Valley Expedition of 1891. Thanks to the work

of Dr. Colville, French Gilman and later naturalists, the list of native plants found within the Monument now numbers 608 species. Gilman later was glad to relinquish his responsibilities as custodian and devote his time entirely to the work he loved—in the field of botany.

And then Ray Goodwin was given an assignment he had been wanting for seven years. In October, 1933, he was told to report to Col. White for duty in Death Valley. He was to be engineer in charge, acting for Superintendent White.

Ray and Neva established a temporary home in one of the cabins on the Furnace Creek ranch. A few months later four ready-cut houses were brought in, and erected along Cow Creek where the Park headquarters village is now located.

In the absence of Park Service funds, Ray was put on the PWA payroll, and his manpower for the job was drawn from the Civilian Conservation Corps. Two companies of CCC boys were brought in by direction of Conrad Wirth, in charge of CCC construction in national parks and monuments. The 400 CCC men, with reserve army officers in charge, built barracks for themselves and then turned to the big task of making Death Valley a habitable place for hundreds of residents and hundreds of thousands of visitors.

They arrived in 1933, and during the eight years they were on duty in Death Valley, graded 500 miles of roads, installed water and telephone lines, erected a total of 76 buildings for the housing of themselves and PWA and Park Service employees. They also built trails in the Panamints and to points of scenic interest all over the monument.

One of their assignments, for which Congressman James Scrugham of Nevada deserved a great deal of credit, was the erection of an adobe village, a laundry and a trading post for the little band of Shoshone Indians—the descendants of the tribesmen who saw the first bearded white men enter Death Valley in 1849. Until this time the Indians, with neither a reservation nor aid from the federal government, had been living in primitive camps and crude brush shelters at the waterholes in the area.

Those were hectic days for Ray and Neva Goodwin. The architectural and landscaping departments of the National Park Service of course were responsible for the planning of improvements, but their offices were far away, and Ray Goodwin, as the man on the job, literally lived with the construction crews. He explored the canyons, seeking new scenic attractions, tramped



One of Death Valley's first Easter services—on the dunes near Stove Pipe Well Hotel. This annual service was the idea of H. W. Eichbaum, builder of the hotel. Frashers photo.

over the terrain to find the best routes for side-roads, and when he could take time off from other duties he sought to clear up controversial points as to the exact routes followed by the '49ers in their trek through Death Valley.

In 1935 a site was selected at 4000-foot elevation in Wildrose Canyon in the Panamints as summer headquarters for the Park Service, and the CCC boys built cabins for the park personnel.

Ray was made superintendent. He and Neva now live in an air-cooled cottage in the Cow Creek village. Their love for Death Valley has never dimmed, and although Ray's retirement is still some years away, he and Neva are planning a home somewhere in the region for their later years, possibly at Beatty.

During a recent visit to Death Valley I asked Ray about his future plans for the Monument. "With the exception of improvements on some of the roads already in use," he said, "I think our road-building program is about finished. The West Side road by way of Shorty Harris' grave and Bennett's well should be paved, also the scenic drive through Titus Canyon. I hope also that eventually we will be able to oil the road into the Monument from Saratoga Springs. Beyond that, and normal maintenance I see no need for additional roads within the Monument. The most important project for the future is the museum."

On the walls of his office at Monument headquarters is a sketch prepared by the Park Service architects for a museum building especially designed for Death Valley. Much of it is to be of native stone, and the landscaping as far as practicable will be of the

plants and shrubs which grow in the monument.

Over a period of years, Ray Goodwin and his staff have accumulated a great collection of exhibits—the relics of the emigrant trek through the valley, artifacts of the Shoshonean Indians, the tools of the pioneers who mined the Death Valley region, mineral specimens, a herbarium and the skins of Death Valley wildlife ready for mounting. Probably no region in the United States offers a greater variety of exhibit material than the below-sea-level floor of Death Valley and the adjacent mountains and canyons.

Today this material is stored at great hazard in the abandoned barracks of the CCC—awaiting the day when a museum will be constructed for its permanent housing.

The museum idea gained a substantial sponsor this year when the Death Valley 49ers under the direction of President Ardis Walker, superintendent in Kern County, voted to make the museum in Death Valley a major objective. John Anson Ford, former president of the 49ers, and a supervisor in Los Angeles County, indicated that he would accept the chairmanship of a special committee to promote the museum project. With the backing of such leaders, and a membership consisting of thousands of the Southwest's most culture-minded citizens, it appears certain the Death Valley museum soon will begin to assume definite form.

Former Secretary of Interior Ickes once considered the feasibility of charging an admission fee for entrance into the Death Valley Monument, as is done in many of the national parks.

The gate receipts, if applied to improvements in the Monument probably would have hastened the improvements needed to take care of the visitors who come in increasing numbers each winter.

But with at least seven entrance ticket offices to be maintained on a 24-hour a day basis, the cost of collection would have been very high. Another obstacle was that the main highway through Death Valley is a California state road, on which no

tolls can be charged. The idea was discarded as impracticable.

Being a mining man himself, Herbert Hoover provided that prospecting and mining would be permitted inside the Monument. Rock collectors also enjoy the same privilege although the park custodians do not encourage the collecting of specimens within their boundaries. Actually, there is a regulation requiring a written permit before materials or specimens may be taken from the Monument, but park

rangers have found it rather inconsistent to attempt to enforce this regulation when the law permits prospectors or miners to haul minerals away by the truck load. The rangers do insist on preserving the scenic values of the landscape, and rock collectors almost without exception have shown good cooperation in this matter.

Ray Goodwin and his men have done a very creditable job of making Death Valley accessible to the public without the extra money which would come from the seven box offices—and Death Valley will remain, as it always has been, a place where space-loving Americans can come and go without restriction as long as they will follow the precepts of good citizenship.

As Park Naturalist H. Donald Curry once wrote: "The broad reaches of the Valley have been pulled together with well-kept highways, made to conform to the topography and blend with the landscape. The wildness of this region, the sense of mystery, the rugged beauty, all have remained unchanged. In spite of the ease of travel, Death Valley has not been civilized or tamed. It will be preserved for all time the same primitive, colorful, unmarred wilderness that awed those pioneers who found and named it."

MAN IN ARIZONA 10,000 YEARS AGO, RELICS PROVE

Positive proof that man and mammoth coexisted in Arizona at least 10,000 years ago—possibly twice that long—has been provided by the discovery of a father-son team whose hobby for 15 years has been archeological research in the field.

Previously, archeology had dated mankind's appearance in Arizona since the advent of the Christian era—probably as recently as 1000 years ago. Man was considered a comparative newcomer to this part of the Southwest until Marc Navarette and his father, Fred Navarette, found the skeletal remains of a hairy mammoth near the border community of Naco, Arizona. In the bones and around them were eight man-made spear heads.

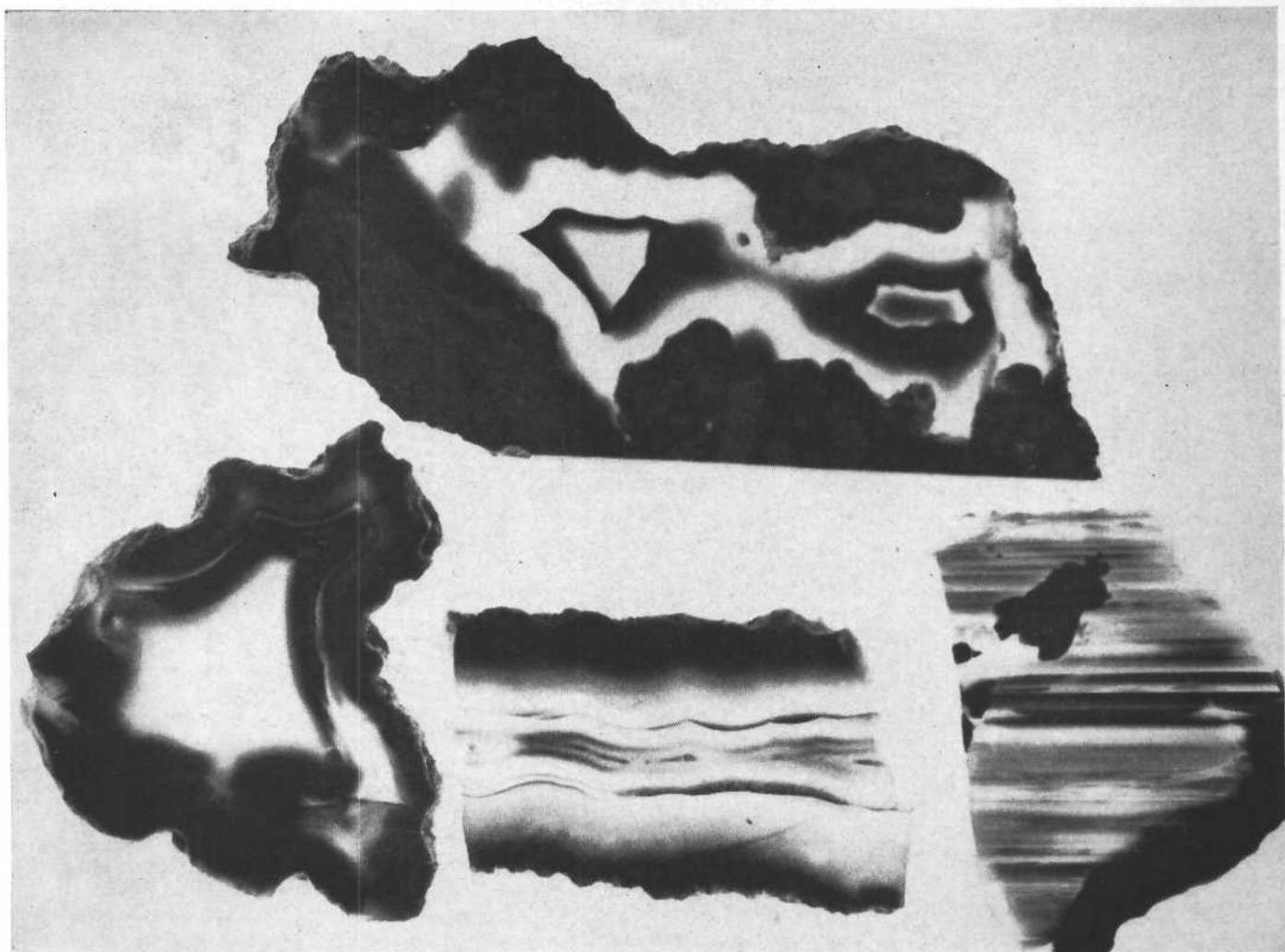
These stone spear points, termed "Clovis fluted points" because of their similarity to points found in New Mexico, made the Navarettes' discovery one of the most important in a century of archeological and paleontological research.

Scientists long had known that mammoths once roamed over Arizona, and that these huge cousins of the elephant and mastodon thrived in semi-tropical lands lush with rainfall and vegetation. But they doubted that man, too, was here in that remote age. The mammoth has been extinct for at least 10,000 years, and probably more than 20,000 years.—*Arizona Republic*.

Desert Quiz

For those who are keen to learn more about the geography, history, mineralogy, Indians, scenic places and lore of the desert Southwest, this Quiz will provide a profitable hour of study every month. You'll not know all the answers to these questions, but this is a good time and place to learn them. From 12 to 14 correct answers is fair, 15 to 17 is good, 18 or over is excellent. The answers are on page 25.

- 1—The ripples on desert sand dunes are caused by — Heat _____. Wind _____. Water _____. Earth Tremors _____.
- 2—When the frost comes in the fall the Aspen leaves turn—White _____. Yellow _____. Red _____. Remain green _____.
- 3—Harqua Hala mountain range is visible from — Highway 60 _____. Highway 66 _____. Highway 80 _____. Highway 99 _____.
- 4—John Hance was a famous guide and story-teller at—Grand Canyon _____. Death Valley _____. Tombstone _____. Santa Fe _____.
- 5—The Goosenecks are in the — Colorado river _____. Little Colorado river _____. Green river _____. San Juan river _____.
- 6—Drainage basin of the Little Colorado river is mostly in—Arizona _____. New Mexico _____. Nevada _____. Utah _____.
- 7—Correct spelling of the largest city in New Mexico is—Albuquerque _____. Albuquerque _____. Albuquerque _____. Alburquerque _____.
- 8—The cactus skeletons so generally used for making lampstands and other novelties are of the species known as—Hedgehog cactus _____. Saguaro _____. Cholla _____. Prickly pear _____.
- 9—Chee Dodge was a famous leader of the—Apaches _____. Navajos _____. Yumas _____. Hopis _____.
- 10—First white European, according to historical record, to go in search of the Seven Cities of Cibola was — Cortez _____. Coronado _____. Vargas _____. Marcos de Niza _____.
- 11—Arizona's famous Camelback Mountain may be seen from — Tucson _____. Phoenix _____. Prescott _____. Flagstaff _____.
- 12—The balsa was—A weapon used by the Indians to kill game _____. Prayer stick made by the medicine men _____. Raft with which the Yuma Indians crossed the Colorado _____. Funeral pyre on which certain Indian tribes cremated their dead _____.
- 13—Amethyst is violet colored—Calcite _____. Agate _____. Feldspar _____. Quartz _____.
- 14—Death Valley was given its name, according to generally accepted history by—The Mormons _____. Manly-Bennett-Arcane party _____. National Park Service _____. Death Valley Scotty _____.
- 15—Ruth, Nevada, is famous for its—Gold mine _____. Copper mine _____. Uranium mine _____. Silver mine _____.
- 16—Reg Manning is a—Senator from Arizona _____. A famous desert cartoonist _____. Editor of Arizona Highways magazine _____. Famous construction engineer _____.
- 17—Timpanogos Cave is in — Utah _____. Arizona _____. Nevada _____. California _____.
- 18—Smoke tree generally blooms in—March _____. April _____. May _____. June _____.
- 19—The old Indian trail shrines are made of—Juniper wood _____. Bones of animals killed in the hunt _____. Rocks _____. Adobe _____.
- 20—Cienaga, a Spanish word often heard in the Southwest, means — Mountain _____. Wild sheep _____. A seepage spring _____. A horse trail _____.



Polished slabs of black agate from Milky Wash in the Levan Ridge area of central Utah. Lapidaries also find it good gem cutting material. Specimens slightly enlarged.

Black Agate in Milky Wash

The day Stanley and Randle Jones found Milky Wash was full of surprises. First there was the delightful painted valley with its colorful clay hills and the two sparkling reservoirs. Then came the agate—a virgin field in which gem quality black stone carried beautiful contrasting bands of chalcedony. Here is the story of a new collecting area—a hidden valley laced with fine cutting material—a rockhound Shangri-la in central Utah.

By W. RANDLE JONES

Photographs by Willard Luce

Map by Norton Allen

"WHY, I'VE seen agate down there in veins 18 inches thick."

This sounded too good to be true. But when we heard the same report from two old-time prospectors from the Levan region of central Utah, we decided it might not be as exaggerated as it seemed. My husband, Stanley, and I resolved to investigate.

It was a brilliant September morning when, with Willard Luce and his

wife, we left our home in Provo and drove south on U. S. Highway 91. The hills to the east were covered with autumn color—muted purples, yellows and reds blending into a lush carpet accented here and there by a brilliant patch of gold or crimson. The valley side of the road was rich with the honey color of harvested grain fields.

The two prospectors' vague directions took us as far as Levan, center of the Levan Ridge country and home

of prosperous sheep and cattle men. We talked to several of the 624 residents and heard: "Agate? Don't know about agate, but there's a lot of flint in Milky Wash."

Flint — that's the tip-off in Utah among stock and sheep men. As they ride along, they notice the agate and obsidian but lump it indiscriminately under that one word.

At Levan Highway 91 divides, with state highway 28 continuing south to join U. S. 89. We were directed to drive 11 or 12 miles south on U28, then turn left on the road which appeared to be the most traveled. We followed the highway down through sage brush flats which had replaced the cultivated sections. We were closer to the foothills now, and the sage was bright with its fall costume of yellow. Here and there a ranch house or turkey farm broke the monotonous desert expanse.



Looking eastward across the small valley of the Milky Wash toward the brilliantly colored clay hills. Best agate material is found at the west end of the valley.

Thirteen miles south of Levan at the top of a rise a well-defined road led off through the sage brush and cedars. We turned onto it and drove slowly, not knowing just what we were looking for. After passing through a narrow pass between two low hills we saw ahead of us sheep corrals and an abandoned shed. We decided to stop and do a little prospecting.

What a surprise awaited us! As we drove up to the corrals and stopped, the entire panorama changed. Just a few feet ahead was a wonderful little valley. Dropping suddenly from the sage brush rise, it stretched lazily between painted hills. We estimated it was about four miles long and three-quarters of a mile across.

The low hills to the east and north of the valley are of highly-colored clay with emerald green, red and tan spilling from the tops of ridges and into the draws. They form a sharp contrast for the cedar-covered hills which mount behind them. Two small reservoirs provide a sparkling bit of reflection in the center of the north end of the valley.

We looked at each other in amaze-

ment. Nobody had mentioned this lovely painted valley in discussing Milky Wash. Later we learned the wash earned its name from the eroding floods which each spring wash away enormous quantities of the valley's clay to turn the run-off water milky white.

From the corrals a narrow truck road led down into the valley and out the south end. We decided to walk rather than to risk driving our passenger car down the dugway. On the valley floor we found our first bits of black agate. A thin coat of clay gave it a blue look as it lay on the ground. The pieces were small, but they showed fine quality with fortifications or contrasting bands of white. We decided this was the place to hunt.

Rock hammers in hand and eyes squinting at the white earth, we gradually worked toward the west side of the valley. The float became bigger and better, and soon we struck pay dirt—agate jutting out of the hillside, its vein exposed by erosion. These veins, we discovered, extend back and up into the sides of the hills and range in size from paper thin to several

inches in thickness at the exposed point. Running thin for a way, the vein will suddenly expand into a bug of agate. Here is one place it pays to whomp a rock even at the risk of fracturing a piece too badly for cutting. Some of it, while appearing to be solid, is composed instead of tiny veins lying close together in the matrix; others form bubbles. Another piece will show an inch-thick vein of agate with bands, windows or inclusions adding to its beauty. In color the agate varies from deep black to gray or brown tones with white or clear chalcedony in contrast.

We found spots where the agate was in combination with a coarse quartz crystal. Much of it had been thrown out of test holes by gold prospectors. Occasionally a piece of very thin, brilliant carnelian agate will lie in tiny bubbles across a piece of agate, matrix or quartz. It makes an attractive window piece, but has no value as gem material.

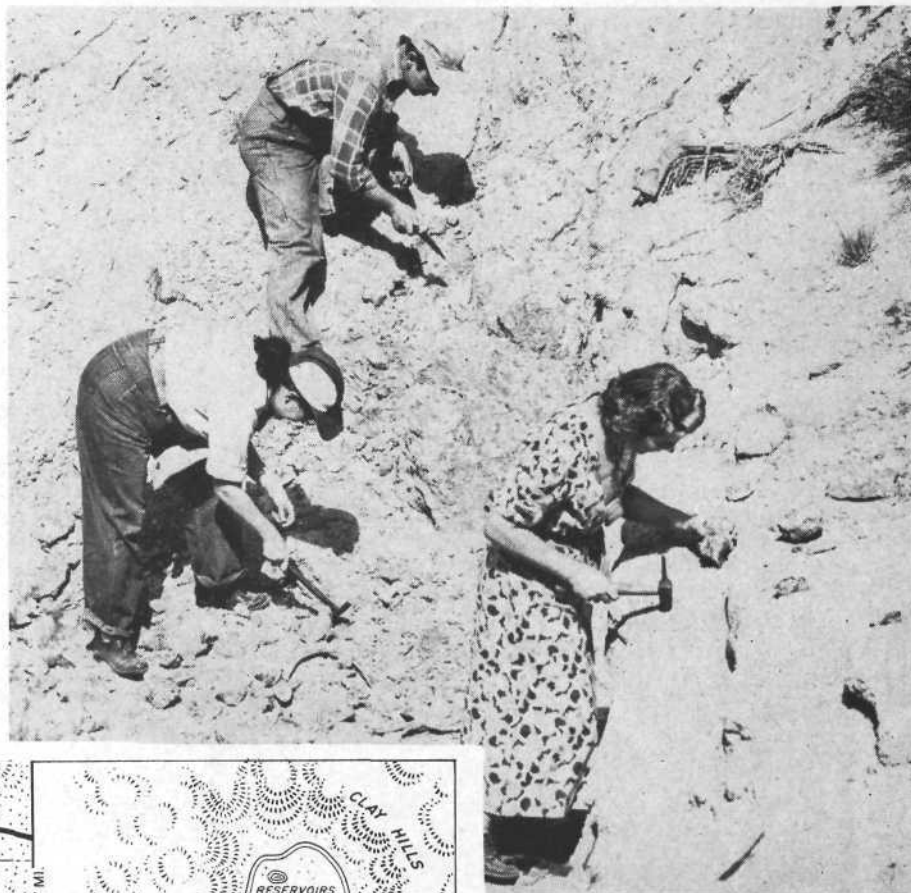
There was evidence of considerable prospecting activity in the valley, but the quantity of agate lying undisturbed

made it seem unlikely the site had ever been visited by rockhounds.

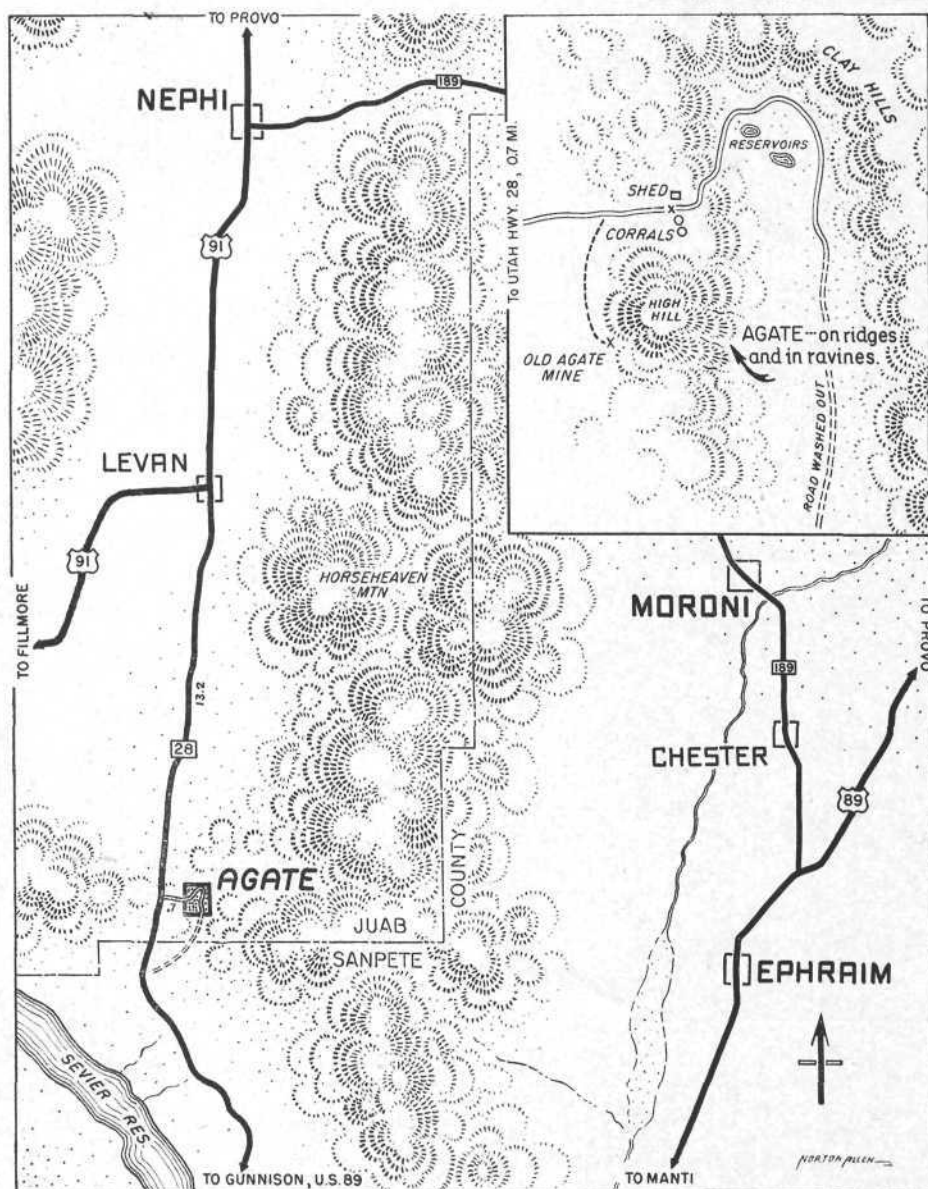
The west side of the valley slopes down from a hill which stands considerably higher than its neighbors. Composed of weathered basalt flows contrasting with mounds of gravel and conglomerate, it is entirely different in composition from the colored clay hills across the valley. We found no trace of agate on the east side.

Our packs filled, we trudged back up the hill to the car, reluctant to leave this quiet valley. The only noises to be heard were the faint clicks of insects and the scampering of an occasional rabbit.

As we turned back toward the highway we noticed a trail leading off to the left. It wound to the west around the base of what we had dubbed Agate



Randle and Stanley Jones and Mrs. Willard Luce open up a vein of agate. The veins, which lace throughout the hillside, vary in size from a thin layer up to eight or ten inches in width.



Hill. Our curiosity was aroused, and we decided to follow. The path led to a spot where considerable agate mining had been done. Large veins had been broken up and picked over. We gathered a few pieces but they were not of the same quality as our earlier specimens from the valley side of the hill.

We returned to the highway and drove south about two miles to just below the county line separating Juab and Sanpete counties. Here the road coming out of the south end of the valley joined the highway. We followed it to see if we might drive right into the valley on a return trip, but were disappointed. The road is completely washed out in several places.

Talking to other rockhounds and prospectors later, we discovered that the whole country south of Levan contains agate and fossil material. Both sagenite and iris agate reportedly have been found in the hills and valleys, but in small quantities.

Stockmen from Manti lease the Milky Wash land under the Taylor Grazing Act. Since it is unfenced range, they have no objections to rockhounds coming in for collecting purposes. No mineral claims have been filed in the agate area.

We have found our Milky Wash black agate cuts and polishes brilliantly, and where the contrasting tones of white or clear bands form a pattern, a very effective gem can be produced.



Utah Artist Paul Salisbury and "Cattle Country," one of his paintings of Southwest desert scenes.

Painter of the Utah Desert . . .

By H. McDONALD CLARK

"SOMETHING ABOUT the Southwest keeps calling me back to desert sights and sounds and sensations. My brush instinctively seeks out vivid colors on the palette, and before I'm fully conscious of it, I'm painting the desert again."

That's how Paul Salisbury explains why his canvases are almost exclusively of desert subjects. Paul, a tall, dark-haired, brown-eyed man in his early forties, is a Utah artist noted for his realistic portrayal of desert scenes.

Navajo Home Life is a typical Salisbury painting. An Indian woman sits at her loom with a woman companion beside her carding wool and a Navajo mother tending a sleeping baby in a cradleboard. Behind them a sheep herder saddles his horse to take the

Paul Salisbury was a professional saxophone player, and a good one. But the saxophone failed to offer much opportunity for art expression—and so Paul turned to painting. On the cattle range and in the Navajo country of his native Utah he found both beauty and action — and the artistry with which he has brought these qualities to his oil canvases has given him recognition as one of the Southwest's outstanding artists.

lambs to grazing lands between the sandstone bluffs of southern Utah.

So realistic is the artist's interpretation of this Southwest scene that one is transported beyond the canvas and becomes intimately aware of warm sun

on sand, the gay colors of the Navajo women's apparel, the coarse texture of wool and the magic design of an unfinished blanket. All the senses are satisfied by the sympathetic treatment of color and form.

During winter months, Paul is content to remain within his studio walls in his home at Provo, Utah, painting from memory or from sketches made on summer excursions. But with the arrival of spring, the great outdoors becomes the artist's studio and, painting under its canopy, he substitutes immediate experience for memory.

Salisbury spends much of his summer in Monument Valley, on the Navajo reservation in southern Utah and northern Arizona. "I like to think of this stretch of desert as my country," he explains. "I am completely at home in it, and it seems to own a part of me. I love to paint the Navajos."

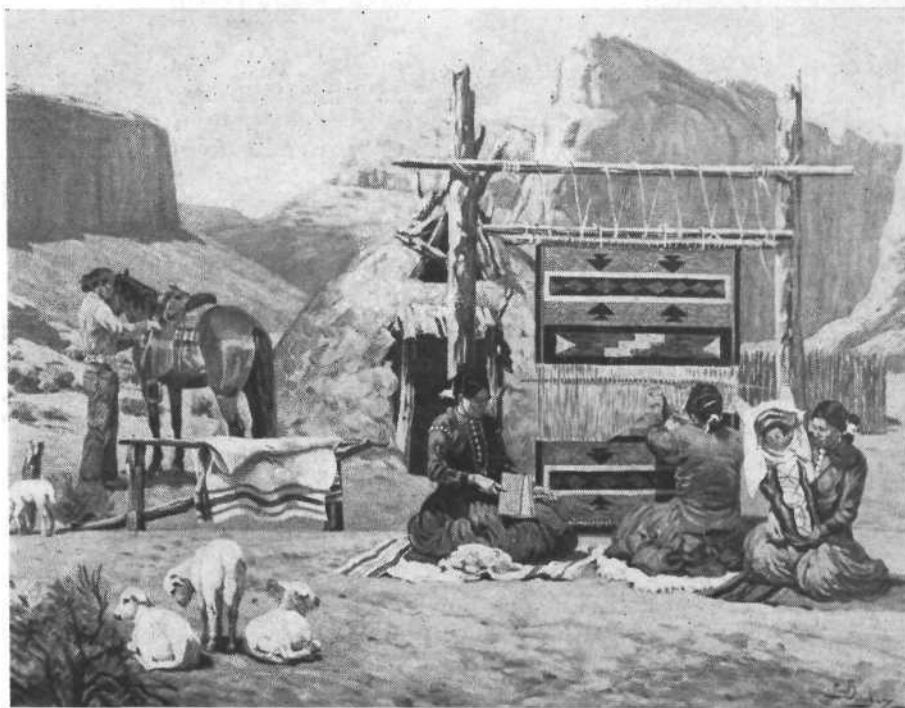
Paul and his wife, Chloe, live in an artistically arranged home in Provo. Here they raised their two children—Paul Murdock, a student at Brigham Young University, and Geraldine, who lives with her husband in Carlsbad, New Mexico. Each spring the family stages a reunion, with frequent trips to the desert where Paul captures its scenic beauty in paintings and sketches.

Many of Paul's orders come from Texas patrons. Numerous California cattlemen and Montana ranchers also order directly from him. An agent handles other sales, especially those in the East. Salisbury paintings hang in schools, banks, libraries, colleges and private homes throughout the country. His oils move rapidly in the J. W. Young Galleries in Chicago.

To develop his natural talent, Paul studied art at West High School in Salt Lake City, at Brigham Young University, Provo, and at Los Angeles Junior College. He took advanced work at Chouinard School of Art and at Art Center, both in Los Angeles. In addition to two one-man shows—one at Provo and the other at the Art Barn in Salt Lake City—he has exhibited in the Palmer House of Art, Atlanta, Georgia; the Utah Centennial Exhibit in Salt Lake City; the Robert Vose Galleries in Boston; Maxwell Gallery in San Francisco; Springfield Art Gallery, Utah, and Bohlman's Art Shop, Reno, Nevada.

The city of Provo bought three of Paul's large oils for the town library.

As a boy on his father's Utah ranch, Paul Salisbury was fascinated by the horses and cows. He still is, and loves to paint them into realistic pictures like this one, "Summer Range."



"Navajo Home Life," a Salisbury painting of reservation life in Monument Valley.

One is of Father Escalante and his party emerging from Spanish Fork Canyon; another shows pioneers crossing the Provo River, and the third pictures Provot, the explorer after whom the city was named, holding council with the Indians at Point of the Mountain.

"When I was a boy on my father's ranch, I was always drawing," Paul

remembers. "The horses and cows fascinated me; they still do. That's why I love to paint round-ups." Many of his canvases—like *Cattle Country* and *Summer Range*—depict South-west cowboy scenes.

Paul was born at Richfield, Utah, near the Kanosh Indian reservation. As soon as he first noticed color and form, he drew with crayon what he saw. Now he expresses himself exclusively in oils.

Music is another art at which Paul excels. Once his profession, it now is his favorite hobby. He has played saxophone in many orchestras and bands in the west—on the old Pantages circuit, in the first Salt Lake Symphony, Brigham Young University orchestra and band, Herb Adkins Pasadena orchestra and the Liberty Park band in Salt Lake City.

A quiet spoken man, Paul is unassuming and humble about his work in art. But he has strong convictions about art which he expresses unhesitatingly: "I believe in conservative painting. The more realistic the picture, the better. Modern art, with its abstractions, holds no attraction for me."

To achieve realism in his paintings, he pays great attention to detail. His brush catches the shoe on a horse's foot, the hidden horn in the sand, the beaded design on a moccasin, the muscles of a mustang. When he was asked to paint a turkey ranch, he first visited the ranch to make preliminary sketches of the grounds, the turkeys and the surrounding landscape. Then he went



to the local library and studied turkeys—from their anatomy to their living habits. "I learned everything there was to learn about turkeys before I began painting," he laughs.

Gifted with a photographic mind, Paul sees a scene once, and it is fixed permanently in his memory. He gleans ideas from momentary impressions or from movie scenes. "In the movie,

Smoky," he says in example, "there is a scene showing a black horse driving a herd of red cattle under a mountain ledge. The picture remained fresh in my mind and later furnished a suggestion for a painting I subsequently developed and sold in New York."

Paul Salisbury is devoted to his art, and he finds constant inspiration in the desert landscape, and in its inhabi-

itants. The Navajo shepherdess with her flocks, the forest ranger on an inspection tour, the pioneer in his wagon trekking westward across the desert, the cowboy in his prairie kingdom, the snowdrifts that isolate valley ranches—all these typical Southwest scenes are captured with refreshing realism by this painter of the Utah desert.

LIFE on the DESERT

By T. E. JEWELL

Here is the amazing story of what happened when a desert prospector found himself in an isolated canyon with a broken leg—and neither food nor water. This is one of the winning entries in Desert's Life-on-the-Desert contest in 1951.

The skinniest, raggedest human being I have ever seen hobbled into our camp on the desert early in the evening of a day in the fore part of May, 1928. He was leaning heavily on a forked stick and had no canteen. His only provisions were two or three pieces of jerked meat that only starvation could make palatable.

The heat of summer was already setting in, and the winter water holes were drying up. In the direction from which he came, the nearest water that we knew of was at the old French Diggings, 25 or 30 miles southwest of our camp at Midway Well, Imperial County, California. We knew that no man as weak and lame as the stranger had ever made that trip without water. Where had he come from? To say that we were merely curious would be a gross understatement.

The stranger did not talk much, at first, just drank water and rested. After a bit he asked if we could give him some clothes and hot water, and while we prepared supper, he scrubbed up. After supper, when we were sitting around the fire, our guest told us his story.

"I left Blythe about the first of March to prospect a month or so in the Chocولات. I found some high-grade float, and traced it a couple of miles, but never was able to find the vein. I'd stayed, hunting for it, until I was just about out of everything but salt and beans, and was heading for the well, here, on my way back to Blythe.

"I was coming down that big canyon five or six miles west of the point of the range. About a mile up there's a place where an old volcanic dike had pushed up across the canyon, and later the water broke through along the east wall. Up a dozen feet or so there's a good sized quartz stringer showing on the canyon wall, and I climbed up to look at it.

"The wall is almost straight up and down, and I was hanging on with one hand, with my feet resting on a couple of rough places, trying to break off a chunk with my pick. The next thing I knew I was on the floor of the canyon with a broken leg.

"My burros had been ahead of me, and by the time I thought of them, they were out of sight. Never did see them again. I lay there quite a while, too damned scared to try to do anything.

"The chances were about a million to one against any help coming along, and the only thing I could see was to put a bullet through my head and be out of my misery. I never will know why I hung my gun on my belt that morning instead of leaving it in my bed-roll, but I had. When I actually had the gun in my hand, though, I knew I did not want to die, and I really started figuring my chances.

"Before it broke through that old dike, there was

a little lake above it. When the dike broke, it cracked on down below the bottom of the old lake. Water runs through the crack slow enough that there is a wet weather buried tank above the dike that will last a couple of months, after a big rain. I had found the hole where game was watering, as I came down, in the grass and arrow-weed about a hundred feet above the dike. Wild burros had watered there that morning.

"I figured if I could get up a few feet on the side of the dike where I could see over the top of the arrow-weed, I might be able to knock over a burro, and a man can live on jerky and water quite a while if he has to.

"I dragged myself to where I could get hold of some drift sticks for splints, and wedged my foot in the rocks. Yes, it was painful, but I was desperate. I set it the best I could and bound it with my underwear and belt.

"Just as it was breaking daylight next morning, a lone burro came in to water. Guess he could smell me, because I heard him stomping and moving around for an hour or more before he finally came close. I only had three shells in my gun, and I used 'em all before I downed him for keeps.

"Boys, there's no ranker meat in the world than an old jack burro, and that's what I'd shot. When I got to him and found it out I was so mad I bawled, but pretty soon it sank in that there wasn't going to be another chance. Anyway, it was meat. I hung it on brush and spread it on rocks to dry. The flies blowed and spoiled about three quarters of it. The rest of it, and water, is what I've been living on for over three weeks.

"I had to scrape my water hole out a little deeper every couple of days. This morning it was almost four feet deep, and when I got out of the hole after getting a drink I slipped and caved down a bank. The water wasn't too good, anyway, so I decided to try getting to the well here, figuring to wait for a car to come through. Took me 14 or 15 hours to make ten or twelve miles, but I made it.

"I really thanked God when I saw your camp, boys. I was hungry, and I'm still hungry. And I'm going to be hungry for a long time to come."

An opportunity came a couple of days later for our guest to ride in to town. Before leaving he gave us detailed instructions for finding the place, and told us that we should find some good paying placer. He also described the location of the high-grade float, and where he had traced it to.

As the car was being turned around for the trip to town he said, "You have the dope, boys, if you're interested, go get it. I've done my last prospecting. From now on I'm staying where I can get to something to eat without crawling. Thanks, and so long."



The bride and groom—Sally Laughter's daughter, 15, and Percy Cly, 35. They are living in a tent until they can build their own hogan.

Hogan Marriage

By JOYCE ROCKWOOD MUENCH

Photographs by Josef Muench

"**W**HEN the soap-weed blooms in November, the snow will cover the stalks," the old Navajo medicine man had said. He was right, too, for the snow had been deep and the winter severe. Now it was March in Monument Valley, and there was still more snow. Spring was held back from the desert.

We were almost as snug as the sheep, corralled in the living room of Harry Goulding's trading post. Patterned Indian rugs of red and black, gray and white, made from the wool of Monument Valley sheep lay underfoot. More of them decorated the

walls and hung over the backs and arms of chairs. One even covered the big round coffee table in front of the open coal fire. The rugs seemed to hold the warmth of the desert sun under which they had been woven.

With the wind accenting our comfort, I saw the promise of a long, quiet evening. The lanky trader would talk on his favorite subject—Navajos—and his wife "Mike" would make a fresh pot of coffee. We would sit and toast ourselves, with only a stray thought for the hillside sheltered sheep and the Indians in their scattered hogans.

Casually, Mike asked her brother,

Two horses and fifty dollars—that was the price Percy Cly paid for his 15-year-old Navajo bride. But he was a good bridegroom—he chopped wood for his mother-in-law. Joyce and Josef Muench were present at the wedding reception — and have given Desert Magazine readers this unusual glimpse of life on the Navajo reservation.

Maurice Knee, "Did you know that Percy was getting married tonight?"

"Percy Cly? Is Sally Laughter giving him her daughter after all? She said last year she wouldn't."

"Can't we go?" someone asked.

"Sally was in the post early this morning and said they were to be married tonight," continued Mike in answer to Maurice's look.



Trader Harry Goulding. His customers are Sally Laughter, her newly married daughter, and 2-year-old son. The Indians depend on the trader for supplies of every kind, often paying with wool, rugs, sheepskins and labor.

He nodded thoughtfully and turned to Harry.

"Did the goats get fed? I was unloading the pickup and didn't have time."

We sat on the edge of our seats and wondered about the equivalent of wedding bells in Navajo life.

Our eleven-year old, streamlined for action, whispered to me. "Aren't we going?" I shushed him. Maurice's bride of a month, Ladora, laid her hand on the boy's knee and commented softly, "Things are like that out here.

No one ever does anything right now."

Our joint urge persisted, "Let's go to the wedding!"

"Well," Maurice finally agreed, "We might take a run down and see if it isn't over yet."

We crowded out, pushing the door shut against the wind and carefully tucking the warmth back into the room. Snow was still falling quietly in a dark world. We found our way down the stairs and into the nearest car.

The car moved, pushed off the ledge where the post sits a mile above sea

level, and the headlights searched frantically for the narrow, dropping road. We plunged into a hollow and up over the sand, around a hogan and off into the darkness. More turns and hills were swallowed up before we came to a stop, high in the air on a cold and windswept knoll. When the lights blinked off, the black void enveloped us, and only the wind spoke.

Maurice had a flashlight, and we headed into a ravine, wading ankle deep in moist red sand. The pencil of light sought out a small wooden door



Navajo life. Living in a hogan made of logs and mud, the members of the Navajo family eat and sleep mostly on sheepskins on a dirt floor. A brush is made from Yucca fibers that grow nearby. For the baby, a home-made cradleboard.

in a mound of the same red sand.

"Wait a minute till I see what's going on," he said and disappeared into the igloo-shaped structure. The ghostly outlines of a white tent, feebly lighted from within, flapped nearby, as though about to push off from its moorings and sail away.

"Come on in," we heard, and the door was opened. Even the shortest of the group had to bend to clear the doorway. We crowded in, standing with necks bent.

A small iron stove gave out heat

that filled every crack of the hogan while we found places on sheepskins.

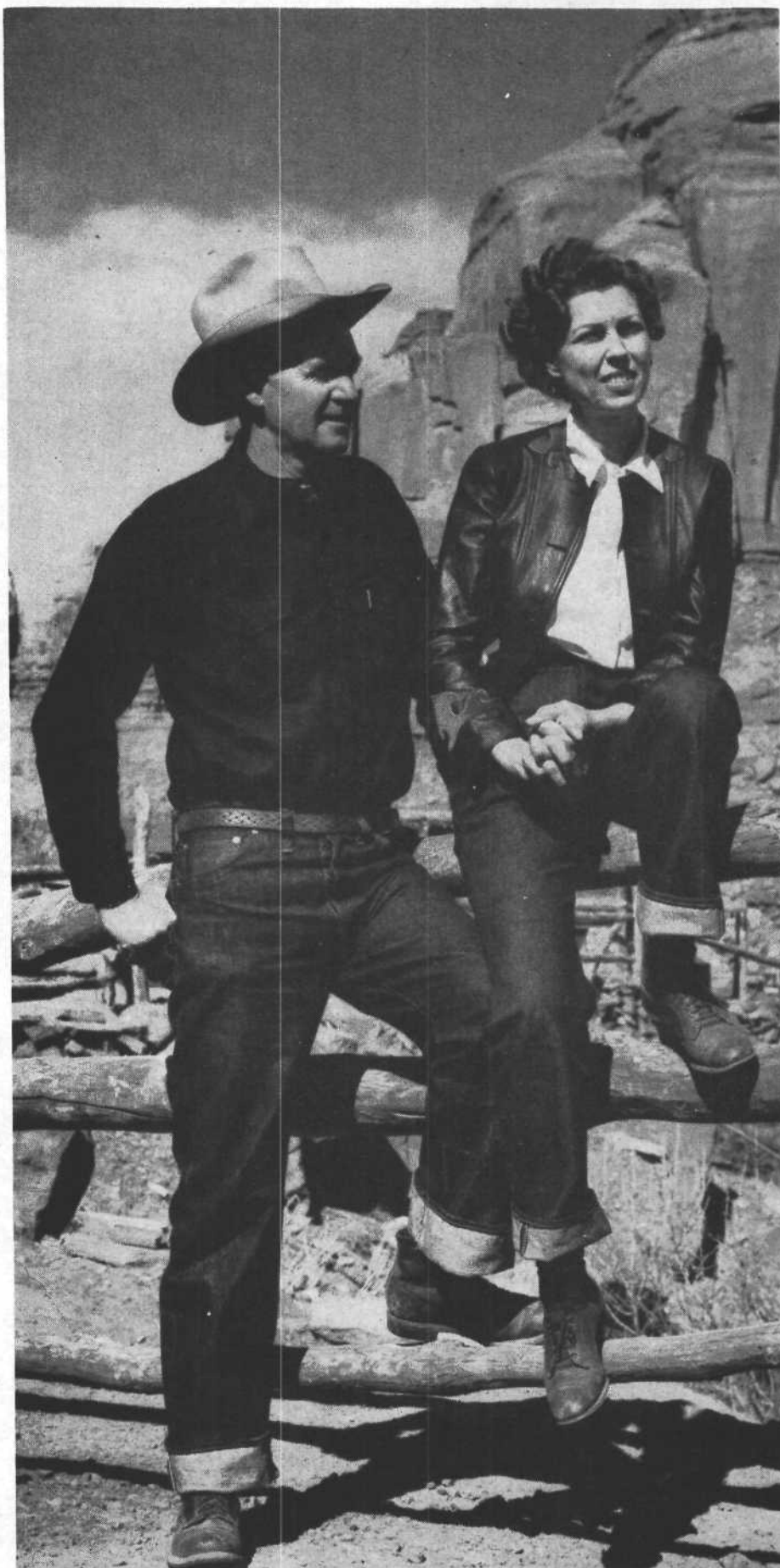
Sally Laughter was sitting in easy Navajo fashion on the floor, about to have dinner with her tiny two-year-old son. On the hard red dirt was a tray-like board set with several dishes. An oil lamp showed up the peeled cedar logs, woven into the spiderweb pattern of rafters and side supports. The clean cedar smell blended into the warmth. Boards made narrow shelves here and there, pushed into any convenient ledge, and a calendar with last Novem-

ber's page uppermost, gave the place a modern, tended look.

Sally smiled as Maurice talked. She fondled the child, touching a burn on his bare leg, comforting, protecting, reassuring him with her hands.

Maurice pushed his cowboy hat back on his head as he swung toward us, still squatting.

"They were married this noon and have the tent next door. The girl won't go away. Would you like to take a picture of the bride and groom? Sally says it's all right to take it here."



Harry Goulding and his wife, Mike. Friends of the Indians, and hosts to Monument Valley visitors, the Gouldings have operated a trading post and lodge in this remote region for 25 years.

He went out to converse with the groom. A picture would be better in the hogan than in a tent. I wondered if Percy would come into the same room with his mother-in-law, in defiance of the Navajo taboo. He spoke some English and probably had attended school, but his bride had not.

I was so busy watching faces and enjoying the scene of which we had suddenly become part that I did not have time to regret missing the actual ceremony. It must have been simple, probably consisting of the usual washing of the bride's hair, and the ritual meal of corn-mush, fed by the newlyweds to each other from a Paiute wedding tray.

We soon became accustomed to having the door open and bring some new element into the room. First it was the bride. Her long, full, sateen skirt hung to the top of heavy shoes. She shifted the blanket around her shoulders and smiled. It was not like Sally's smile. Would her smooth skin ever take on the chiseled wrinkles, her broad face ever look like her mother's? Just now it was like a blank page beside the character revealing one of the older woman. How many daughters before her had been married off with or without her consent from this hogan, or some similar hearth in the limitless desert? How many more children could this old woman expect to raise? The girl was well built — too mature for fifteen. The mother, I would have said, was a hundred; but there was the two-year old to deny it.

Between snatches of Navajo, Maurice explained that Percy was willing to be photographed. Sally had known him since he was a little boy who used to roll rocks out on the road to delay the infrequent cars. Percy said he wasn't going to stop looking at her now just because he had married her daughter—not even if the Medicine Man did prophecy he would go blind.

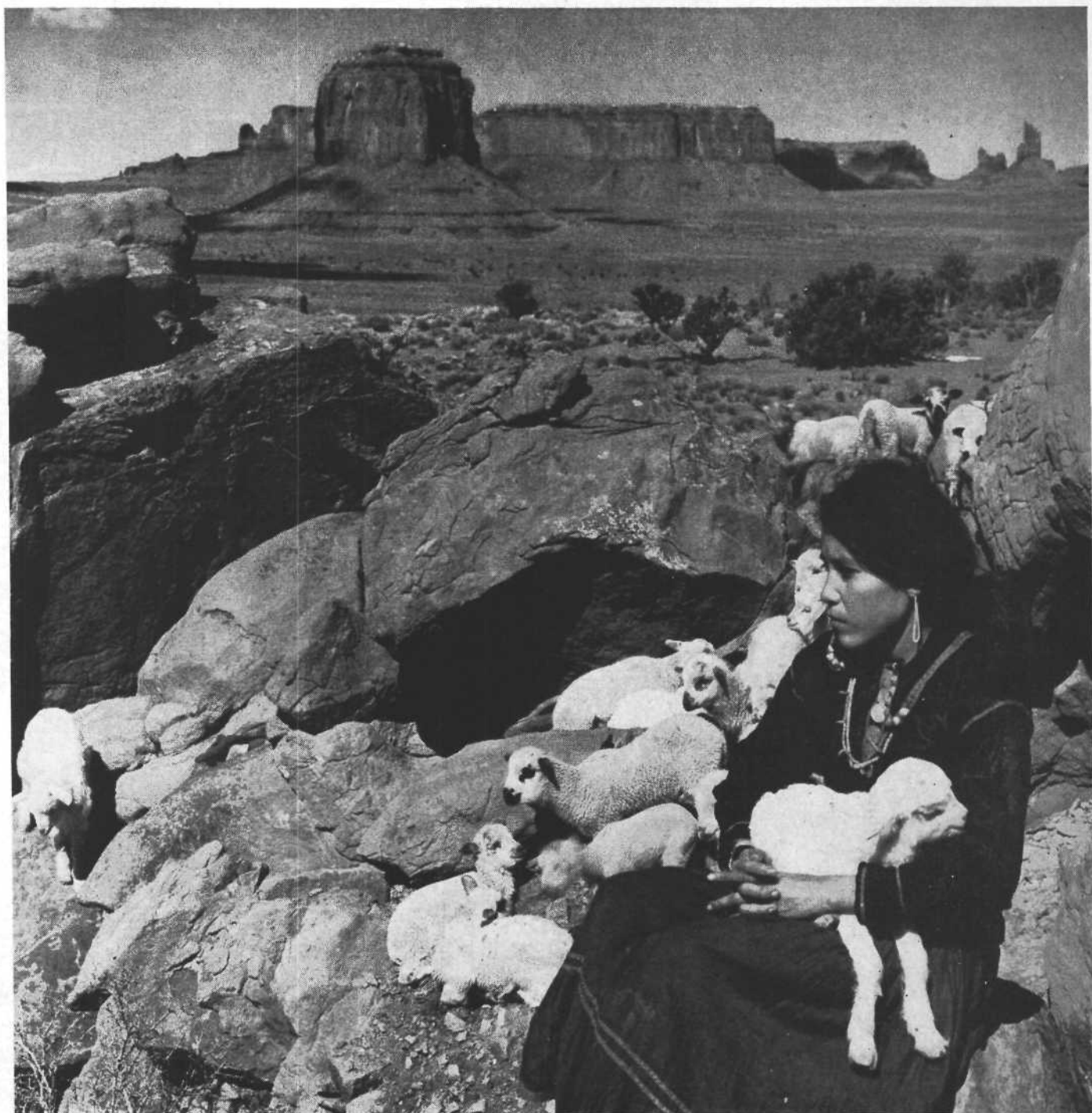
The groom, when he joined us, was all smiles. They were for us, his guests, for Maurice, his white friend who spoke excellent Navajo. He never looked at Sally nor at his bride.

The picture was posed and the flash set off. When the bulb had cooled, it was presented to the Indian baby. He accepted it unsmilingly and held on as though the white boy might try to take it from him.

Maurice sat on his haunches and talked, one groom to another.

"I had to give my mother-in-law one mule, two horses and ten dollars for her," and he jerked his head toward Ladora in jeans and fancy cowboy boots. "What did you have to give your mother-in-law?"

Ladora, as befitted a bride, said



Young Navajo shepherdess. Nine-year-old Mary has never been to school but remains at home to care for the flock—which is the family's main source of livelihood.

nothing of what her mother in Kansas City might have thought of the recital, and Sally joined Percy in gales of laughter.

The Indian was a little reluctant, but he finally admitted to two horses and \$50.

The girl half smiled, still aloof, as though none of this concerned her. Her only glances, when the wide-open brown eyes left our faces, were for her mother.

We found bills in our purses to proffer as wedding gifts, some for the bride, some for Percy. It was warm with our heavy coats on, sitting a few feet from the stove, and we were glad finally to be standing, smiling, saying goodnight.

Outside, the cold air shook us. We found the night clear, starred above and black below, as we trudged up through the sand to the car.

"What is the bride's name?" I asked.

"I guess she doesn't have one,"

Maurice laughed. "Just Sally Laugh-ter's daughter. I asked Sally once and she shrugged her shoulders and said she didn't know."

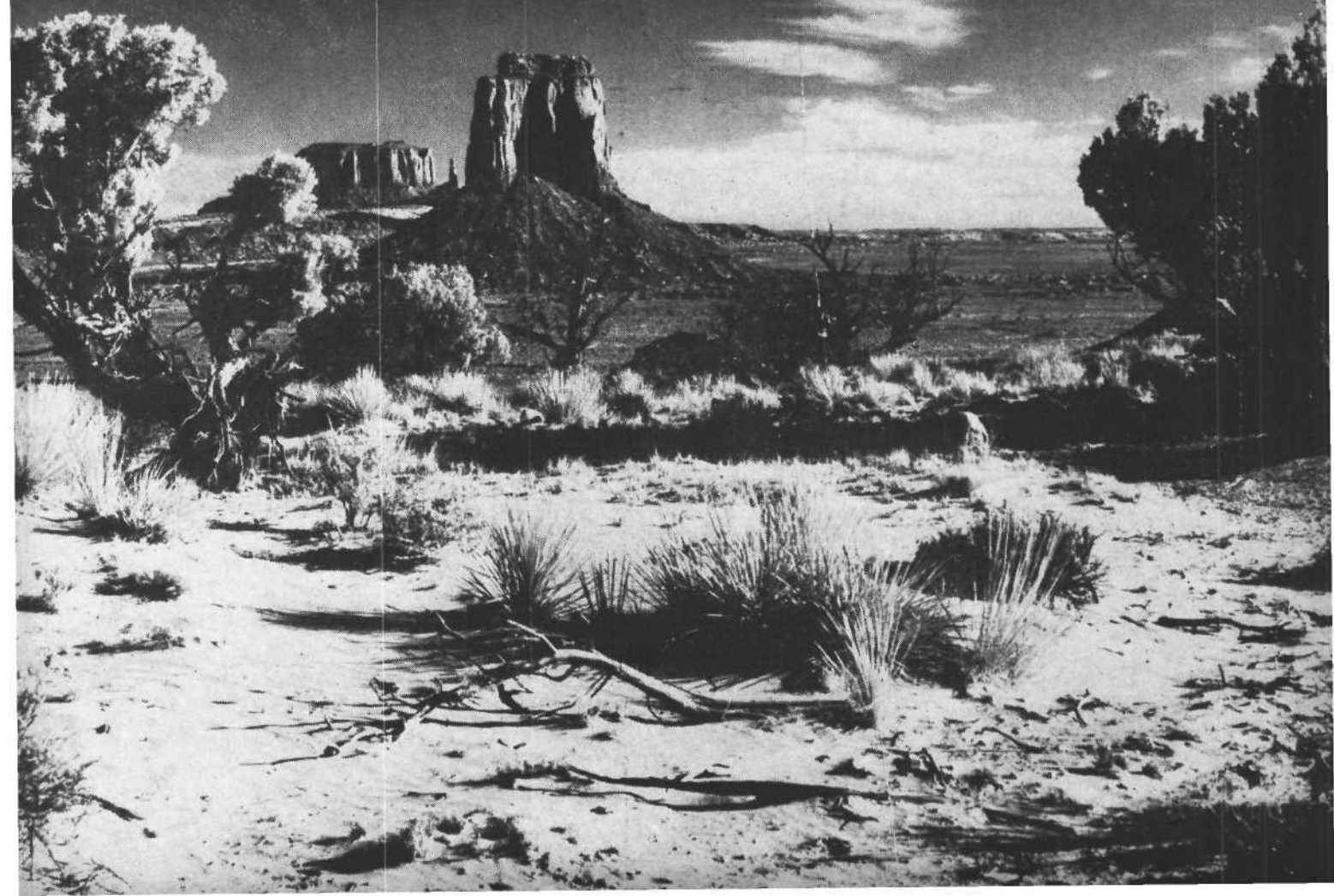
Two horses and \$50! And she wouldn't leave her mother. He was a good son-in-law, Sally had said. He cut wood for her after the wedding.

From the hillside corral, as we passed it, came the sleepy tinkle of bells as the sheep snuggled closer to their little March lambs.

The Barren Land

By CLAUDE C. WALTON
Evanston, Wyoming

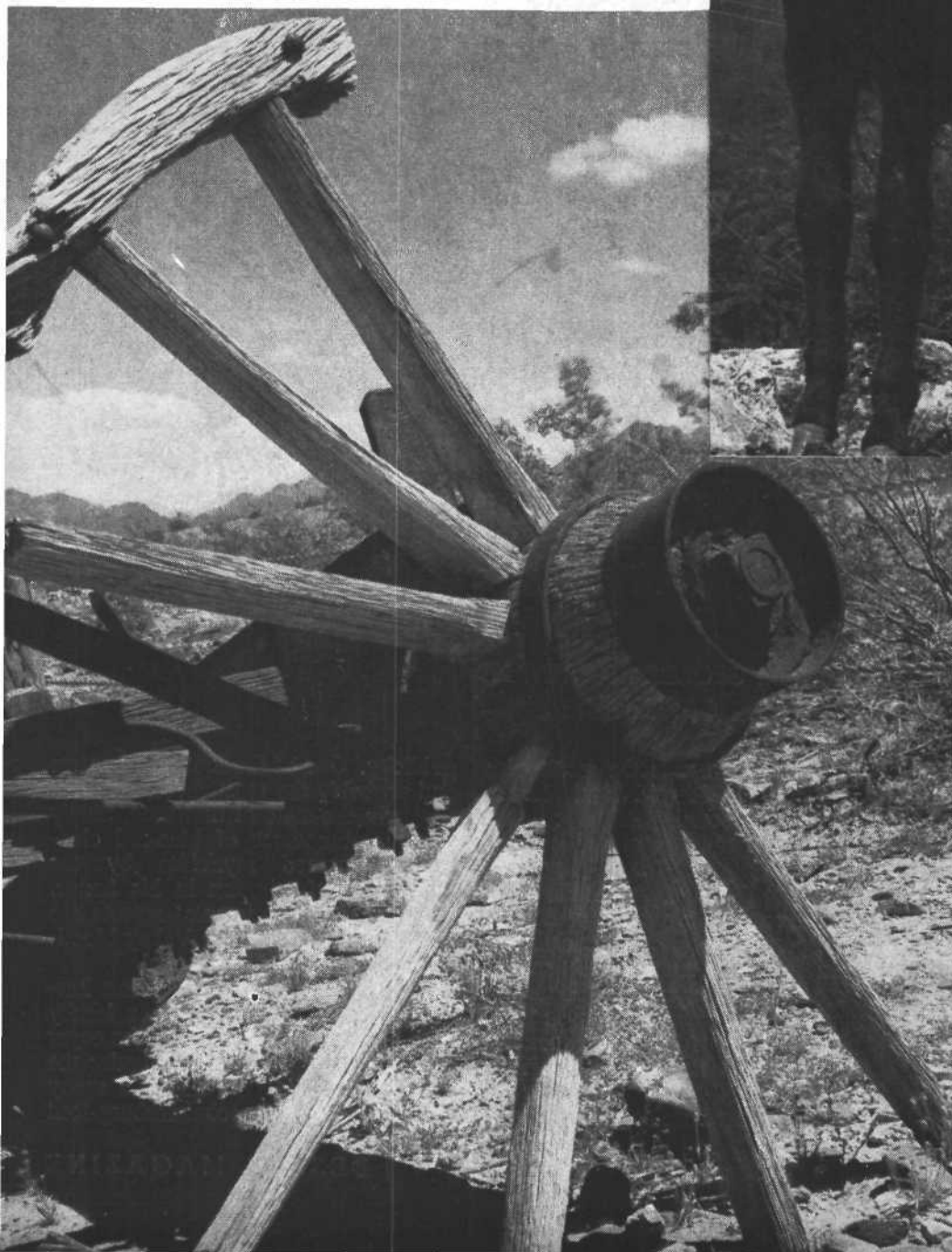
Why do I see beauty in this greasewood, rock and sand
When other people think of it as God's forsaken land?
Why do I feel kinship to the wind, the stars, the sun,
And find a healing solace in this waste that others shun?
It may be that earth's elements have known, the same as I,
The stranglehold of city streets where dreams decay and die;
It may be that they hunger for the freedom of the plain
As a parching wheatfield hungers for the ecstasy of rain.
Here, the wind is freed from mountains and the tyranny of trees,
And they race with wild abandon over dry, unfertile leas;
Here, the clouds have spilled their anguish on the peaks beyond
the rim,
Peacefully they guard the Heavens when the evening light grows
dim;
The moon has room to wander through the magic of the night
While the shadows stretch to Heaven where the Cup hangs close
and bright;
Here a soul can grow in stature, reaching to the very stars,
And a heart forget the prison of convention's rigid bars.
These are things that make me love it, God-forsaken though it be;
Oh, barren land, in your domain a man is free—is free.



PICTURES OF THE MONTH

Security . . .

Mary Otto of Los Angeles, California, photographed this affectionate mule family on a trip through southern Arizona last January. Taken with a Rollieflex camera, Plus X film, 1/100 second at f14, the picture is first prize winner in Desert Magazine's June photo contest.



Tragedy . . .

A wagon wheel rotting in Pioneer Cemetery, Ehrenberg, Arizona, intrigued Photographer Paul E. Black of Los Angeles, and he made this study to win second prize among June photo entries. Black used a Rollieflex camera, Plus X film and G filter, 1/25 second at f16.



Desert friends of Francis Marion "Shady" Myrick pay tribute to the first gemstone prospector of California's Mojave Desert.

In Memory of a Rockhound . . .

By PAT and GEORGE STURTEVANT

Photo by Al Gonzalez

THE SLIGHT, friendly man who was the Mojave Desert's first gemstone prospector was honored in permanent and appropriate fashion last Memorial Day at the Rand District cemetery in California.

Dedicated to Francis Marion "Shady" Myrick, a memorial monument was unveiled by representatives of Naval Ordnance Test Station Rockhounds and the Desert Lions Club of Rand District, assisting Harold Weight of Twentynine Palms.

The monument, blanketed with Mojave Desert gemrock specimens em-

bedded in masonry, is the result of a suggestion by Harold and Lucile Weight. The couple had urged that the obscurely marked grave be more fittingly designated. Dwight Crawford and other gemstone enthusiasts of NOTS seconded the idea, and with the cooperation of the Lions club, arranged for the monument. A special feature is a bronze plaque in the headstone, which describes Myrick as "The Godfather of American Rockhounds."

From the years of 1900 to 1925, Myrick explored the Death Valley region with considerable success and

publicity. One of the first gem hunters and probably the most successful rock dealer in the state at that time, Shady was the discoverer of blue-red chalcidony, named myrickite by the Smithsonian Institution in his honor. Recorded in governmental reports are his other finds of Death Valley bloodstone, jasper and hyalite opal.

Unlike the misanthropic desert hermit of folklore, Myrick was a kindly man always ready to answer the eager questions of tenderfeet, or ponder the problems of the day with his many friends in the Johannesburg-Red

Mountain (then Osdick)-Randsburg region. He admitted that he missed the companionship of men during his months-long trips into Death Valley, but a love of reading and the company of his two pack burros compensated for the lonely periods between visits to town.

All over his hunting grounds (north-east of Joburg and into the southern reaches of Death Valley), Myrick maintained caches of supplies and developed waterholes which saved the lives of countless persons.

Born in Iowa in 1850, the patron saint of present day rockhounds began his prospecting in Colorado at the age of 21. For years he served as sheriff in the rough 'n ready boom town of Leadville during the '80s, and he was a member of the Colorado legislature during this period.

An ironic twist of fate, it was during a pilgrimage to the site of his pioneer days in Leadville that Shady died, on June 27, 1925. "I've wanted so long to meet again my early day friends in Colorado, Utah, Idaho, and the Western states," he told Rand residents just before his departure. His body was returned for burial in the Joburg cemetery July 4 of that year.

Although his interests were predominantly those of the gem collector (having been guided in that direction by Joe Foise of Johannesburg), Myrick could smell a good claim as well as the next one, and several of his gold finds created minor flurries of excitement in the mining world. One of them was responsible for his nickname. As a young man of 19, James Rosser of Randsburg relates, Myrick came upon a mining camp, "Oro Fino," in Colorado, and proceeded to annoy many of the hardbitten old timers with his questions. One finally growled, "There's a good shady place under that tree—dig there." The young man did as he was bid, and struck a rich lode before nightfall. From that time on, he was "Shady" to most everyone.

His last big strike was made just two years before his death, in 1923. On his way home to Johannesburg from Death Valley, 40 miles east of Osdick, he came upon a lava hill he had marked 12 years previously as a possible gem region. Looking over the ground casually, he broke off a piece of burned conglomerate, and discovered—gold. Although a small tent city of prospectors sprang up beside the claim, and samples promised rich possibilities, the strike turned out to be a narrow vein of gold which had toppled over from erosion of the rocks around it and thus appeared to be wider and deeper than it was.

Although the countryside that for-

merly was almost solely Myrick's—between Red Mountain and the southern end of Death Valley—is almost completely closed to visitors by the navy, specimens from this territory have found their way into collections of rockhounds all over the world, and no doubt many that Shady himself packed into the Rand District are gems prized by owners.

GROW CACTUS FROM SEED

It is fascinating to watch the first spines form on a seedling cactus. Dr. A. D. Houghton, cactus expert and author of *The Cactus Book* suggests planting cactus seeds as soon as they are obtained from the parent plant. The older the seed, the slower it will sprout. Fresh seeds germinate almost 100 percent, and the little plants are interesting from the start.

ANSWERS TO DESERT QUIZ

Questions are on page 10

- 1—Wind.
- 2—Yellow.
- 3—Highway 60.
- 4—Grand Canyon.
- 5—San Juan river.
- 6—Arizona.
- 7—Albuquerque.
- 8—Cholla.
- 9—Navajos.
- 10—Marcos de Niza.
- 11—Phoenix.
- 12—Raft with which the Yuma Indians crossed the Colorado.
- 13—Quartz.
- 14—Manly-Bennett-Arcane party.
- 15—Copper mine.
- 16—A famous desert cartoonist.
- 17—Utah.
- 18—June.
- 19—Rocks.
- 20—A seepage spring.

Hard Rock Shorty OF DEATH VALLEY



"What do you do for fresh meat away out here in a forlorn place like this, with no cattle and no railroad?" the visitor was asking. He and his party had stopped at the Inferno store after a summer trip to a Nevada gold mine in which he was interested.

"Shucks, they's plenty o' meat around here," answered Hard Rock Shorty who was keeping store while the clerk pumped gas in the stranger's car out in front.

"O! Hank Hoskins who loaf's around here when it's too hot to work his tungsten mine, goes out nearly every morning and brings in a jackrabbit—and they're not bad eatin' if yu know how to cook 'em. An' when we don't have fresh meat they's always plenty o' jerky. See them strings of it hangin' on the rafters over yer head?"

"Usta have fresh eggs every day an' chicken on Sunday in the old days when Pigsaw Bill had his chicken ranch up on Eight Ball crick. But Bill ain't bin in the chicken business since that big cloudburst hit the Funerals back in '27. So all we git now is powdered eggs and canned chicken once in a while.

"Bill's chickens wuz doin' fine at first. He growed a nice patch

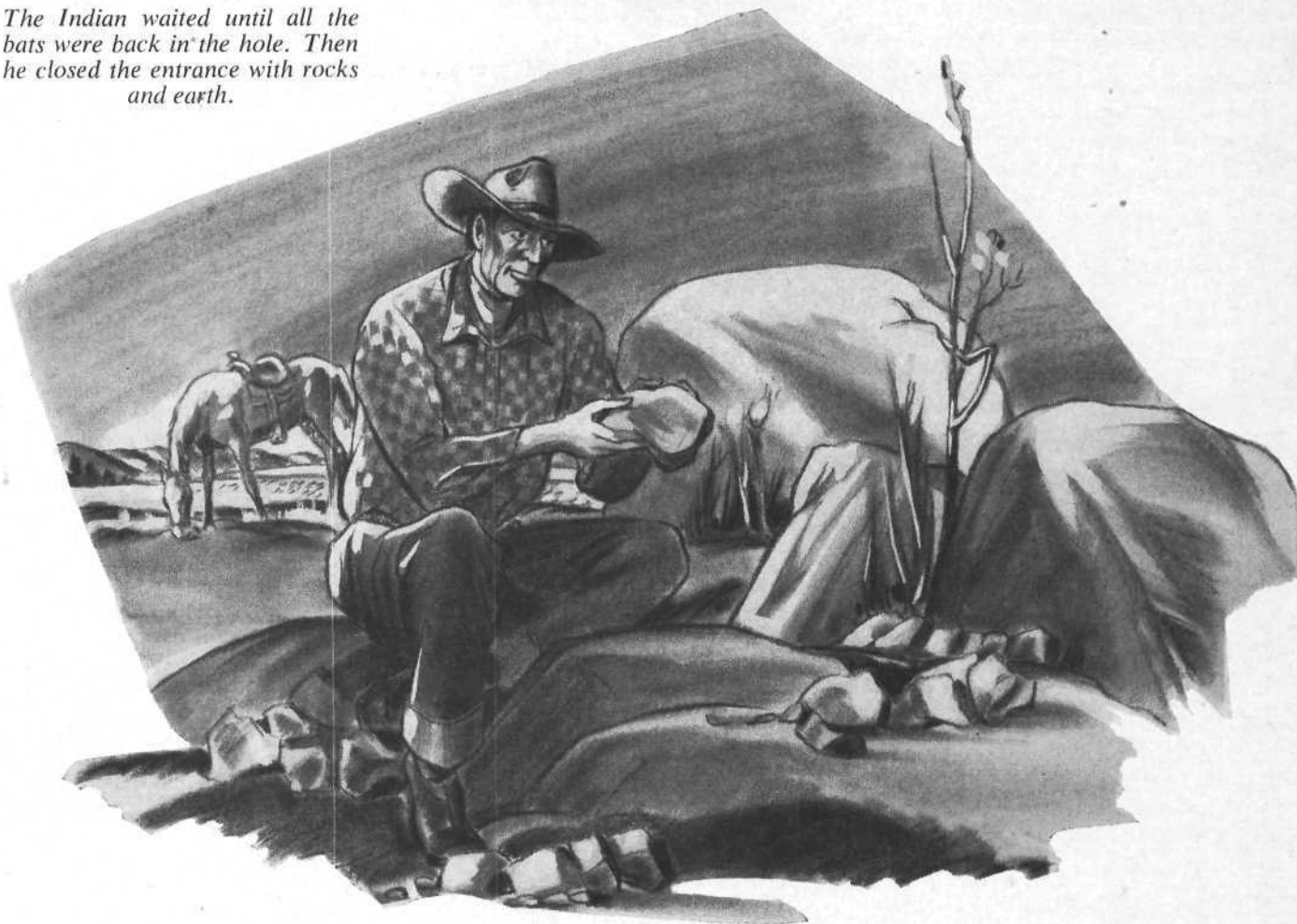
o' feed fer 'em down below the spring, and built a fence o' mesquite to keep the coyootes out.

"Then that blasted storm come along. Rained six inches in a hour an' a half an' a wall of water come down that crick—musta bin 10 feet high jedgin' from the damage it done. Bill was up workin' his mine on Piebald mountain that day, an' the chicken pen was on high ground so the birds wuz all right. But the garden all went down the canyon—an' there wuz nothin' left fer 'em to eat.

"Bill made a trip down to Barstow to get a load o' feed fer 'em. He came back complainin' that the price o' grain wuz too high so he bought a few sacks o' chicken feed and then went over to the wood shop and got a dozen bags o' sawdust. 'I'll mix it half an' half,' he explained. 'The chickens'll never know the difference, an' that's the only way I can support 'em 'til I git that garden growin' again.'

"At first it looked like a good deal. Chickens wuz doin' all right. Then in about three weeks one of 'em laid a wooden egg—an' inside o' a few days they wuz all layin' wooden eggs. So Bill quit the chicken business."

The Indian waited until all the bats were back in the hole. Then he closed the entrance with rocks and earth.



Lost Gold of the Vampire Bats

By JOHN D. MITCHELL
Illustration by John Hansen

MORE THAN 75 years have passed since the day an old Papago Indian tied his pinto to the hitch rack in front of the trading post in the little Mexican town of Arivaca, Arizona, and entered to barter gold nuggets for groceries and brightly colored calico.

Gambucinos were cleaning up an ounce or more of gold per day on Arivaca Creek at that time, and the appearance of an Indian with a handful of large nuggets did not excite much curiosity.

However, as the years passed and the old Papago continued to make regular trips to the store, and as the placer along Arivaca Creek grew leaner and leaner, the *gambucinos* began to take notice of the Indian and

wonder where he got his gold. He had no visible means of support, was never seen to work a mine of any kind and always took life easy. He and his family never missed a fiesta at the old Pueblo of Tucson and always seemed well supplied with money. As the years passed, the mystery deepened.

Luis Alvorado, an old Yaqui Indian who grew up in and around the Arivaca and Baboquivari country, remembered rumors of a rich gold mine that had been worked by the Spaniards in the Baboquivari foothills. The ruins of their houses still stand in the valley east of the Baboquivari mountains. Long rows of graves near the ancient foundations indicate the area once supported a large population.

If what the old Papago said was true—and his gold gave credence to his tale—there is a rich gold mine hidden somewhere in Arizona's Baboquivari mountains. The nuggets, mined by Spaniards centuries ago, are bagged in buckskin and lie among the whitened skeletons of vampire bats who formerly guarded the lode. John D. Mitchell tells the story of a lost gold mine which has held the imagination of Southwesterners for more than three-quarters of a century.

Many believed that the Indian had found a rich placer or a cache of gold nuggets somewhere in the Baboquivari mountains near his brush hut. No amount of coaxing on the part of the merchant or the *gambucinos* around Arivaca could induce the old Papago to reveal the source of his wealth. Those who followed him always found their search ending at the hut—with no gold in sight. The mystery became more baffling when the old man moved his family to a new location on west Arivaca Creek and still continued to barter gold with the trader in town.

The merchant had given up all hope

ever of discovering his wealthy customer's secret. Then one day the Indian came in for his usual supply of groceries and, after paying the bill in gold, told the merchant that he had come to tell him the secret of the gold nuggets. "I am an old man," he said, "and I will not be able to make use of them much longer.

"Many years ago," he began, "while trailing a wounded deer across the foothills on the eastern slopes of the Baboquivari mountains, I sat down to rest on the top of a long ridge running in a northeasterly direction from the peak. As I rested, my attention was attracted by a flight of large vampire bats. They were emerging from a crevice not far from where I was sitting. Never in my life had I seen so many beautiful silver-colored bats of such size.

"I made a torch from a piece of dry ocotillo bark and threw it down into the crevice. From its dim light I could see what appeared to be a mine stope. Ore had been taken from so near the surface that the roof had broken through, creating an opening through which the bats might enter and leave the mine. A slight draft was coming from the opening, indicating that there was another entrance somewhere. I investigated further and dis-

covered a small hole several hundred feet farther down the mountain side. Evidently it had been used by some wild animals for a den. It proved to be the portal of an old tunnel that had been covered over with mesquite poles and earth, now almost rotted away.

"After cleaning out the hole I made another torch and entered the tunnel," the Indian continued. "About 100 feet in I came upon a number of metates and manos stacked against the wall. A short distance farther on was a pile of broken ore and some old mining tools and candlesticks such as were used by early Spanish miners. On the floor of one of the several large stopes was another pile of broken ore, and farther back against the wall stood a cross and a shrine such as Spaniards and Mexicans often build in mines they work. In a small tunnel or cross-cut on one side of the long tunnel was a pile of buckskin bags full of gold nuggets. Evidently this gold had been recovered from some placer operations in another part of the mountain. Against the back end of the little tunnel a pile of gold bars gleamed yellow in the dim light of the torch. Some of the buckskin bags had rotted, and the nuggets had trickled down, forming golden mounds on the floor of the tunnel.

"As I made my way out of the tunnel I stopped and picked up one of the buckskin bags of placer gold. I did not think the gods would object to an old Indian like myself taking one small bag of all that gold to buy food for himself and family. After concealing the tunnel entrance I made my way down the mountainside to my house and buried the sack of gold beneath the dirt floor.

"It was from that sack," he explained to the trader, "that I got the gold I bartered with you for food and supplies. Go to the mountain, climb up the long ridge, and when late in the evening you see a large number of silver-colored bats in the air, you will be near the mine."

The merchant, mounted on his mule with his *mozo* running at his stirrup, left early the next day. Arriving late on the ridge he and the boy saw bats circling overhead and decided to wait until the next morning to search for the mine.

Just as daylight was breaking, the old Indian rode into camp. He seemed worried. He told the merchant he was frightened and regretted telling him the secret of the mine. A tribal law forbade any member of the tribe to disclose the location of a mine or treasure to an outsider. The Papago feared retribution at the hands of the gods.

"I waited until all the bats were back in the hole; then I closed the entrance with rocks and earth. No more bats," said the Indian. "They all will die in the hole, and no white man will ever find the mine."

No more vampire bats have ever been seen in the Baboquivari mountains. Nor has anyone ever found the lost mine they guarded.

• • • BLEACHED RED MEN NEED INDIAN MAKEUP

When a Hollywood motion picture company called 450 Indians for work in a film being shot in a Central Arizona mountain location, makeup men discovered the Indians had to be sprayed with dark paint before they would look properly red for the camera.

A Yakima chief explained it: "Indians today do not expose their bodies to the sun as their ancestors did. For years they have worn conventional clothing, and their protected skin has become as light as that of the average white man. Their faces and hands are dark, and a few weeks of exposure to the sun would bronze their entire bodies."

Instead of waiting for the sun to do the job, the movie men sent to Hollywood for 700 quarts of liquid makeup and a spray gun.—*Arizona Republic*.

Picture-of-the-Month Contest . . .

The black and white pictures used in Desert Magazine generally come from two sources: (1) Photos submitted by writers with their feature stories, and (2) Pictures entered in the Picture-of-the-Month contest. In addition to the prizes awarded in this contest, the editors often select from among the entries other pictures for purchase—to be used sooner or later in Desert's pages. So, if you are a free lance photographer, amateur or professional, the best way to sell a picture to Desert is to enter it in the monthly contest.

Entries for the August contest must be in the Desert Magazine office, Palm Desert, California, by August 20, and the winning prints will appear in the October issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the Desert Magazine office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA

Letters

Rattlesnake that Glowed . . .

Walla Walla, Washington
Desert:

Did I read in *Desert Magazine* an item to the effect that rattlesnakes are phosphorescent at night?

Recently I was unfortunate enough to get my car stuck on the high crater of an old little-used road along the railroad tracks in rattlesnake country. I worked until dark trying to get off.

At last I realized I would have to get help. I started out on the road; but it was too dark for me to follow, so I made my way to the railroad tracks and walked along between the rails. I had heard that this was a favorite haunt for rattlers, but I assumed they would be bedded down for the night, especially since a storm was coming. Raindrops already were falling.

Suddenly, about two ties ahead of me, I saw a snake, wriggling frantically to get out of my way. It appeared to be white and had a steady glow.

Could it have been an albino, or is there a possibility that rattlesnakes phosphoresce? I must admit I didn't tarry to find out if it really was a rattler. It might have been a harmless bull snake.

JEAN B. STALKER

Desert has published items about the fluorescence of scorpions, but never has heard of rattlesnakes with that talent. Albinism, while rare, is well known in snakes and has been recorded for many species. An albino snake has white skin with the normally dark pattern showing vestigially in faint yellow. Even if he weren't white, a startled snake's quick escape movement would make him easier to see, especially against the dark background of oiled railway ties.—R.H.

Aztec, Not Tule Well . . .

Los Angeles, California
Desert:

Tommy Jones and Gus Lederer are buried at Aztec Well in the Chuckawalla Mountains of California and not at Tule Well, as reported on page 23 of May *Desert*.

I am writing the story of Tommy Jones, the old prospector who traveled the desert regions since the '90s. My husband was Tommy's grubstake partner in several mining ventures.

Tommy died at Aztec Well in 1922, alone and many miles from his mining camp near the spot which since has

become Desert Center. He had been dead three days when Gus Lederer found him. A handsome bronze tablet with a poem by Gus was placed over his grave, but later was stolen by vandals.

Fifteen miles back in the mountains from Aztec Well, which can be reached only by burro trail, there is a monument to Jones and to my husband. There is no danger of vandals carrying this away; it will stand for all time. Across the center of one huge, towering rock Tommy Jones had painstakingly chisled in large letters that stand out in bold relief the following legend:

The Blue Dick Camp

Dick Haskins (year) Thomas Jones

The prospector with the burro pictured in the November, 1950, issue of *Desert Magazine* is Tommy, just before he made his very rich strike at Goldfield, Nevada. He later sold this property for \$75,000.

TESSIE COOKE HASKINS

• • •

Tunas Without Spines . . .

Gila Bend, Arizona
Desert:

Early in June, my father and I drove down into Baja California to the Indian village at Santa Catarina Mission. Although it was too early for the fruit of the prickly pear to be ripe, the tunas were approaching a mature size, and a fairly clear demonstration of the Indian methods of gathering and despoiling the fruit was possible. (July *Desert*.)

One of the Pai Pai women showed us how it was done. With a pair of wooden tongs—fashioned of two sticks each about a foot in length and an inch or so wide and lashed together at one end—she grasped the fruit and detached it from the cactus plant with a quick, sharp twist. Before placing the picked tuna into the net bag which hung over her left forearm, she brushed it with a tuft of short sage brush branches. These processes were repeated until the bag was almost filled with fruit.

Grasping the bag at either side, she then proceeded to shake and jostle the fruit with an up-and-down see-saw motion. Since the tunas were not ripe, we could not judge just how effective the operation was; but our Indian demonstrator explained that when the fruit is ripe the spines are dry, and the shaking causes them to be rubbed loose and to fall through the coarse mesh.

The tuna bag is about 15 inches in diameter. In constructing it, the Indian craftsman ties woven agave fiber cordage into a rectangular net with meshes about an inch square. The two

ends are brought together and fastened to form a cylinder, one end of which then is gathered together and tied, completing the bag. A cord is threaded through the loops at the top, the ends being left long for suspension.

The netting also is made in larger sizes for carrying purposes. Use of these burden bags was widespread among Southwestern peoples, and numerous ancient examples exist. I have seen them pictured on painted Hohokam pottery vessels from Arizona, dating from around 600 A.D. I sketched one of these pottery figures as I'd remembered it—an Indian carrying a net burden bag suspended from a headband—and showed the drawing to the Santa Catarina tribesmen. They seemed keenly interested in the ancient origin of this household utensil.

Recently, Ruth Simpson of Southwest Museum and I were discussing the possible significance of the hooked staff often carried by painted figures in ancient pottery designs. Miss Simpson suggested it was used for hooking down saguaro fruit. But according to our Pai Pai informant, it served to balance the load being carried in a burden net. The Indian woman gave a good demonstration, using a long staff-like stick.

NORTON ALLEN

• • •

Answer from O.C.M.L.S. . . .

Santa Ana, California
Desert:

As a member of and legal counsel for the Orange Coast Mineral and Lapidary Society, I have been instructed by the unanimous vote of that society to answer the letter, "Blow-out Trail to Hauser" written by Mary Frances Berkholz and published in the June issue of *Desert Magazine*.

In this letter, through thoughtlessness or maliciousness, the O.C.M.L.S. has been quite definitely linked to an act of malicious mischief and even of lawbreaking—the strewing of broken glass upon and along the Wiley Well road which leads from Highway 60-70 to the turn-off to the Hauser Beds. Neither this society nor any of its members had anything whatever to do with this contemptible act.

The facts concerning this matter are as follows:

Our field trip director in company with several other parties traversed this road on April 2, 1952, enroute to the prominent dike known as the "Thumb." The boxes of glass alongside the road and the loose glass in the road were present at this time. On April 4 the field trip director again traveled this road in order to set up markers to guide the members of the society into the Hauser area. On this

trip he found in addition to the glass a row of broken and up-ended bottles blocking the turn-off to the Hauser area. Since the boxes of glass appeared at the very spots where the club markers would have to be set, there occurred the coincidence mentioned in the letter.

Our field trip director was fortunate enough to meet and talk with some local people, and these people placed the time of the glass dumping as sometime Friday afternoon, March 28.

The O.C.M.L.S., whose member cars had to traverse and retrace this glass-strewn road on their way to and from the field trip location, were as shocked and disturbed by this low act of vandalism as anyone could be and discussed at some length the possibilities of taking some action. However, action was reluctantly abandoned as not feasible, since we didn't know nor could we discover who the culprits were.

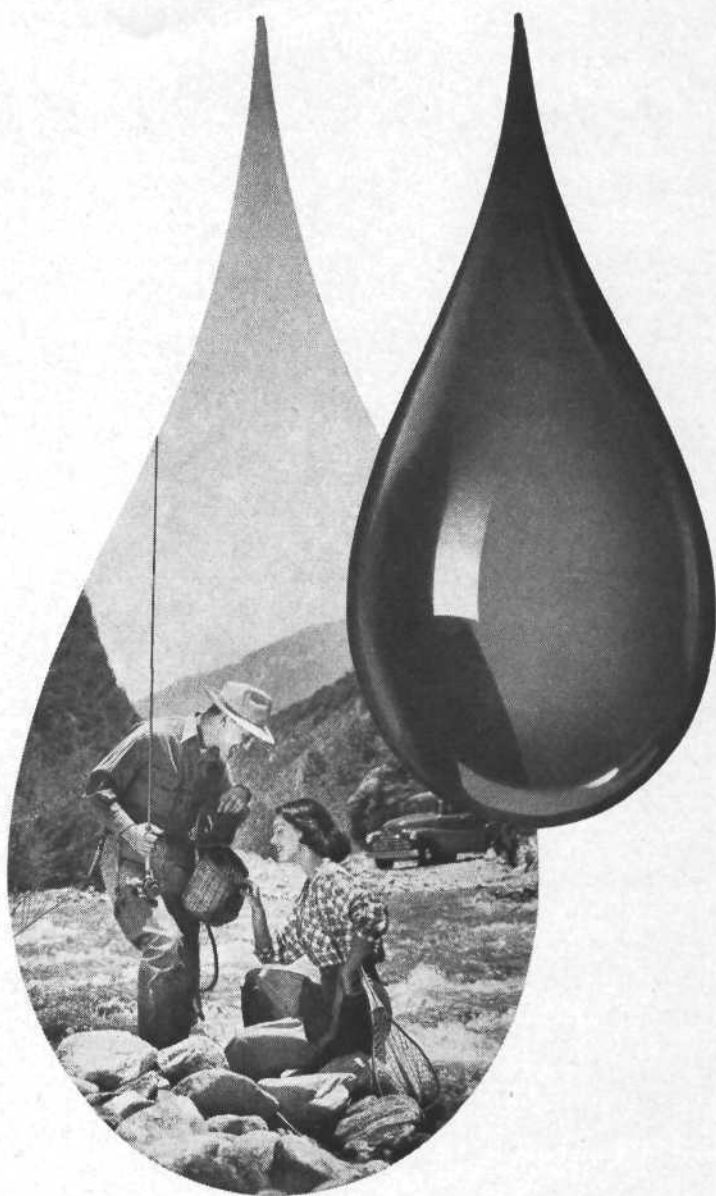
Now for the Orange Coast Mineral and Lapidary Society or its members to be accused by indirection of this despicable act has not produced a very happy situation and has caused the entire membership shocked sensibilities, injured feelings and pain.

There is not a shred of truth in the innuendos contained in that letter, and it is a great surprise to us, who are lovers of the great outdoors, that a society of the good character and standing as ours should even be mentioned in connection with a despicable deed of this sort.

CARL C. COWLES

Desert Magazine regrets very deeply that an injustice has been done the Orange Coast Mineral and Lapidary Society. But we want to assure Attorney Cowles that neither "thoughtlessness nor maliciousness" entered into the writing and publishing of the letter. Mrs. Berkholz merely reported what she saw along the road. And until your letter came it never occurred to me that O.C.-M.L.S. were the initials of your society. We join you in your condemnation of the litterbug who placed the glass there. But perhaps there is a moral for all of us in this incident: "Don't place field trip markers alongside junk piles—for signboards, like humans, are apt to be judged by the company they keep." We who have our homes on the desert would like to have the cooperation of our visitors in keeping the desert clean. I'll confess it is not a very pleasant occupation, cleaning up debris that has been left by someone else—and yet there are many of us who frequently do that very thing.—R.H.

AUGUST, 1952



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Mines and Mining

Washington, D. C. . . .

A comprehensive minerals survey will be made of the 15,400,000-acre Navajo-Hopi reservation in Arizona, New Mexico, Utah and Colorado. Acting Secretary of the Interior Richard D. Searles said the survey is being made to determine extent of deposits of coal, copper, gypsum and other minerals known to exist on the reservation. The minerals study and geologic mapping will be done at a cost of \$71,500 under contracts with the New Mexico School of Mines, Socorro, and the board of regents of the university and state colleges of Arizona. The department said work would begin immediately and would be completed by June 30, 1954.

Ruth, Nevada . . .

Foley Brothers, Inc., of Ruth has the contract from Kennecott Copper Corporation for its development program at Ruth. The deep Ruth shaft is now down more than 285 feet, and the Kellinske shaft has been enlarged for a distance of 790 feet.—*Mining Record*.

Washington, D. C. . . .

Congressional members from New Mexico, Arizona, Utah and Colorado have announced they would favor an investigation of uranium mining in the Colorado Plateau—if there is justification for one. There have been complaints that small operators have not been able to get enough leases for prospecting from the government and that methods of grading ore are unfair.—*New Mexican*.

Reno, Nevada . . .

Alluvial deposits being worked at Copper Canyon by Dredge No. 2 of the Natomas Company illustrate how gold is washed downward through broken and porous strata to impervious bedrock or clay. Average depth of the operation's placer channels is 50 feet, with the lower 15 feet containing the principal values. The nuggets recovered are small and angular in shape, with sharp corners which prove they had not traveled far and were not subjected to much scouring. Boulders of copper ore lie in the channels, indicating that the precious metal is derived from copper-gold bearing veins in rock formations a short distance above. Dredging and lode mining operations recover the gold.—*Mining Record*.

Washington, D. C. . . .

Tests of two large Utah deposits of bituminous sandstone show it could be recovered and processed successfully into gasoline and other fuels, Interior Secretary Oscar L. Chapman disclosed in a Bureau of Mines report. In a series of hot water separation tests, the bureau recovered up to 96% of the bitumen from sandstone deposits found near Vernal and up to 94% of the bitumen from sandstone near Sunnyside, Carbon county. The two deposits are estimated to contain at least 2,000,000,000 tons of bitumen.—*Salt Lake Tribune*.

Salt Lake City, Utah . . .

Consolidated Uranium Mines, Inc., reported to its stockholders that 5454 tons of uranium ore had been produced between December 1, 1951 and April 30, 1952 from the company's Temple Mountain properties. E. G. Frawley, president, said this brings to 26,873 tons the amount of ore produced in Emery County by the firm and its predecessor company. Gross ore sales on production during the December-April period were \$150,788.—*Salt Lake Tribune*.

Cisco, Utah . . .

With picks, shovels, jack hammers and mucking machines, three sisters are recovering uranium ore on a claim in the Yellow Cat district near Cisco. Lois and Elphne Long and Mrs. Evelyn Hamerick work the Cactus Rat property, a surface mine. Their father, Frank O. Long, has a contract with Climax Uranium Co. for the claim. He supervises its operation but subcontracts the work to his daughters. The sisters estimate they've taken out between 8000 and 10,000 tons of ore in the three years they have been on the property.—*Moab Times-Independent*.

Blanding, Utah . . .

Uranium prospectors in the Henry Mountains region of southern Utah will be interested in a new Geological Survey map of the area. The map, drawn to a scale of approximately two miles to the inch, shows outcrops of highly colored rocks, existing land lines, trails, local elevations and related features. Copies may be obtained for \$1.00 each by writing to the Distribution Section, Geological Survey, Denver Federal Center, Denver, Colorado.

Grants, New Mexico . . .

Independent uranium miners in the Grants area delivered their first truckloads of ore to the Anaconda uranium buying station early in June. The station, near Anaconda's new mill site, is eight miles west of Grants. The ore is being stockpiled and will constitute a ready supply for the mill when it begins operation.—*Grants Beacon*.

Winnemucca, Nevada . . .

Permanent suspension of operations at the Cahill quicksilver mine in the Poverty Peak district of Humboldt county has been announced by B. A. Wharton, superintendent for Cahill Mines, Inc., lessees of the property from Mrs. Dorothy Cahill of Reno. Wharton said the decision was based upon the difficulty of winter operations and high costs.—*Humboldt Star*.

Yerington, Nevada . . .

The \$38,000,000 development of Anaconda Copper Mining Company at Yerington is part of an expansion program in which Anaconda plans to spend \$289,000,000, Cornelius F. Kelley, chairman of the board, told stockholders. When the huge Yerington plant is completed in 1953 it will crush and leach the ore from the open pit operation site which Anaconda acquired and explored ten years ago. According to Kelley, the ore body contains approximately 35,000,000 tons of copper oxide ore having an average grade of 0.97 percent. It is estimated that production will be 60,000,000 pounds of copper per year during the first two years of operations, and 66,000,000 tons annually thereafter.—*Battle Mountain Scout*.

Kanab, Utah . . .

With an additional loan from the Defense Minerals Procurement Administration, King Manganese Mine will resume operations after a severe, expensive winter. A high pressure pump and other new machinery will be installed to make production easier, faster and more economical.—*Kane County Standard*.

Gabbs, Nevada . . .

Gordon and Lindsey Smith of Gabbs and Barney O'Malia of Hawthorne report their El Capitan mill in Gabbs Valley is treating 20 to 25 tons of tungsten ore daily. Fifteen tons a day are mined at the partners' Commodore property, an open pit operation 10 miles north of Gabbs, and their El Capitan scheelite mine produces 10 to 15 tons daily, some of it being stockpiled. Further development in the area is planned, including probable installation of a concentrating plant in Smoky Valley.—*Pioche Record*.

Here and There - on the Desert

ARIZONA

Indians Want Weir Removed . . .

WASHINGTON—"Uncle Sam took the whole country away from us. We can't expect the government to give the whole country back to us, but it ought at least to give us enough water for our land, so we don't starve to death."

Jay Gould, member of the Mojave Tribal Council, thus expressed the views of Colorado River Indians on the reservation at Parker, Arizona, when he appeared with other tribal leaders before a House reclamation subcommittee.

The Indians asked for the removal of a rock weir in the Colorado river which serves as a diversion dam for the Palo Verde Valley's water system on the California side of the stream. The dam, according to the Indians, backs up the water and makes worthless a large area of reservation lands on the Arizona side.

The Indians favored the construction of a 38-mile canal from Parker dam which would cross their lands and then siphon the water under the river to the California side to serve Palo Verde Valley. Such a canal, they say, not only would solve their problem of drainage, but would serve many thousands of additional acres of land.

Imperial Irrigation District opposes construction of the proposed diversion canal and suggests the existing weir be incorporated in a permanent diversion dam. According to M. J. Dowd, consulting engineer for the district, removal of the weir would cause more than 100,000,000 cubic yards of silt to wash downstream. At least 700,000 irrigated acres, mostly in California's Imperial District and in the Yuma Project in Arizona, would be damaged, he said.

Dowd conceded that the lowering of the river which would result from the removal of the weir would alleviate a drainage problem in the Colorado River Indian reservation on the east side of the river. "But," he said, "the reservation would have a serious drainage problem anyway."

A third plan, submitted by the Reclamation Bureau, would substitute a less expensive pumping plant at Blythe.

The present weir was constructed in 1944 as an emergency measure to provide for continued gravity diversion for the Palo Verde Valley after the river level dropped sharply following the building of Hoover dam above.

Bracero Agreement Extended . . .

WASHINGTON — Before the old pact expired June 30, the United States and Mexico extended for 18 months their agreement permitting Mexican farm workers to help harvest crops in this country. Certain important amendments and additions have been made. One key change provides that both the U. S. and Mexican governments must hold a joint investigation before an employer can be refused use of Mexican labor for violation of the agreement. The expired pact gave the Mexican government the right to put farmers on the ineligible list.—*Arizona Republic*.

Vitamin Lack Blamed . . .

TUCSON—Eye diseases of North American Indians may be due to a deficiency of Vitamin A, a University of Arizona biochemist believes. Announcing the results of a five-year nutritional study made among Papago Indians on the Sells reservation, Dr. A. R. Kemmerer reported "extensive deficiencies in Vitamin A and a considerable number of cases of Vitamin C deficiency. The lack of Vitamin A showed up in inflamed eye conditions and skin abnormalities." Dr. Kemmerer found children attending schools benefiting from the federal hot-lunch program much healthier than those enrolled at schools where such lunches were not available.—*Arizona Republic*.

Will Rogers Highway . . .

HOLBROOK — The 2200-mile route of Highway 66 was given the name of one of the most distinguished Americans ever to travel its scenic length when Will Rogers Highway was dedicated in June. Ceremonies were held at state borders along the eight states through which the roadway passes.—*Holbrook Tribune-News*.

Last Jerome Graduation . . .

JEROME — Graduation exercises this June wrote an end to the Jerome, Arizona, school system which had its beginning in a one-room schoolhouse in 1884. In that year, Jerome School District No. 9 was organized in the mining town clinging precariously to a copper-rich mountainside. When ore bodies were depleted, people began leaving Jerome, and faults in mining property caused large areas of the town to cave in. In 1930 enrollment in Jerome schools reached almost 2000. When a recent census showed that fewer than 100 children expect to be in Jerome next year, the board of education decided to close the school and send students to Clarksdale. Strong possibility has been reported that the empty school buildings, as well as the Phelps-Dodge corporation hospital may be used by Navajo Indians for educational facilities.—*Arizona Republic*.

Bill and Katherine Wilson, for many years hosts at Rainbow Lodge in northern Arizona, moved to their new home at Clarksdale, Arizona, in June. Mr. and Mrs. Merritt Holloway have taken over the management of Rainbow and will continue to run pack trips over the 14-mile trail to the Bridge.

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Only Southern Streams Dry . . .

TUCSON—Arizona's rivers, fed by melting May snows, ran far above normal throughout the state except in the southern area. The Salt River contributed 138,100 acre-feet or 290 percent of normal to Roosevelt Dam; the Gila River above Safford Valley flowed 26,160 acre-feet, 266 percent of normal; Verde River flowed 19,260 acre-feet, 169 percent of normal; Little Colorado registered 837 percent of normal with a flow of 21,090 acre-feet at Cameron; Colorado River flowed 4,990,000 acre-feet, 156 percent of normal.—*Arizona Republic*.

CALIFORNIA

Sea Rise Alarms Naturalists . . .

INDIO—The National Geographic Society is concerned about the recent rise in California's Salton Sea. Society naturalists are afraid the rare gull-billed terns and white pelicans will be forced from their island rookeries by the rising salt water. Because temperatures at times exceed 120 degrees in the area, and shade is sparse on the islands, pelicans and terns on Salton Sea reverse the natural incubating process. They cool their eggs instead of warming them. Nesting pairs take turns dipping into the water, wetting breast feathers and crouching above their eggs or nestlings to shade them. Evaporation from the feathers creates enough natural "air conditioning" to offset heat that would broil the baby birds. The unusual incubating habits intrigue the National Geographic Society, and it hopes to continue studying the birds at Salton Sea.—*Arizona Republic*.

Road Feud Brewing . . .

PALM DESERT—A first class feud between Riverside County's Coachella Valley and San Bernardino County's Twentynine Palms area appears to be brewing over U. S. Highway 70. Highways 60 and 70 now both enter California at Blythe and have a common route to Beaumont. Twentynine Palms proposes to intercept Highway 70 at Hope, Arizona, 55 miles east of Blythe. It would have the official designation of 70 changed from that point west. Traffic then would cross the Colorado River from Parker, Arizona, to Earp in San Bernardino County, continue west on the Metropolitan Water District aqueduct highway, thence over a still to be constructed highway to Twentynine Palms and on through Morongo Valley to rejoin Highway 60 and 99 at the junction near Whitewater. Should the Twentynine Palms plan go through, traffic would bypass the Coachella Valley resort area completely.—*Riverside Enterprise*.

New Homesteading Area . . .

NEEDLES—The reclamation bureau has indicated it will open by late summer the 3500-acre tract of land located on the Colorado River below Davis Dam near the Ft. Mojave Indian reservation. The area was withdrawn from public use by the Reclamation Act of 1912. About half of the available land is within the reservation and will probably be farmed by Indians. The remaining 1700 or 1800 acres will be available for homesteading, with veterans to be given first preference.—*Las Vegas Review-Journal*.

Enlarge Salton Sea Park . . .

INDIO—The State Park Commission has voted to add the Painted and Box Canyons area east of Indio to the new Salton Sea State Park and plans to make a survey of palm oases on the east side of Coachella Valley to determine whether some of them should also gain state park status. The 23,360 acres covered by the Salton Sea park includes virtually all the watershed of Painted Canyon, the full length of Box Canyon and almost all the watershed of nearby Hidden Springs Canyon. — *Riverside Enterprise*.

Former Hilton Shop Again Open . . .

THERMAL — Charles J. Hansen, formerly curator at the Sutro Museum at Golden Gate Park in San Francisco, purchased the art, gem and cactus shop formerly operated by John Hilton at Valerie Jean corner, and reopened it in June as the Coachella Valley Mineral, Art and Gem shop. For many years the Hilton shop was a rendezvous for artists, rockhounds and cactus growers. The place has been unoccupied the last two years since John Hilton opened an art studio at Twentynine Palms.

Mercury Reaches 150 Degrees . . .

BARSTOW—Searing ground temperatures of 150 degrees, believed to be the highest ever recorded, have been reported on California's Mojave Desert by four University of Southern California geologists. Dr. Thomas Clements, leader of the scientific team, shoved a thermometer into the ground 30 miles east of Barstow and obtained a reading of 110 degrees. He was amazed to discover, however, that when he held the thermometer three feet off the ground, the mercury climbed 40 degrees to 150. The highest temperature ever officially recorded in Death Valley was 134 degrees. Recordings of 135-degree heat have been made on Africa's Libyan desert. — *Yuma Daily Sun*.



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Death Valley Days on TV ...

DEATH VALLEY—Pacific Coast Borax company re-opened the Furnace Creek Inn during the month of June to provide lodging for a troupe of 70 players engaged in preparing a television broadcast of "Death Valley Days" which formerly ran as a popular serial on radio. The scenes for the new TV series are being photographed by Gene Autry's Flying A Productions, and it is understood they will be presented this fall, with Pacific Coast Borax again as the sponsor.

NEVADA

Wild Horses Dispute ...

VIRGINIA CITY—Two schools of thought have arisen concerning the future of wild horses which roam the hills of the Comstock Lode country. One faction, supported by the Humane Society of Nevada, is urging that the horses be left alone to roam as they please. The other group, led by sheepmen, claims the horses' free and uninhibited movements are injurious to grazing lands. The situation was brought to a head recently when county commissioners considered the request of a rendering firm to round up the horses and dispose of them. The Humane Society persuaded the commissioners to turn down the proposal.—*Las Vegas Review-Journal*.

Plan Lake Mead Expansion ...

BOULDER CITY—When Undersecretary of the Interior Richard Searles indicated he favored opening the Lake Mead shoreline to private competitive enterprise and requested an outline of specific plans, the Boulder City Chamber of Commerce recreation committee got busy. The group tentatively is studying a site for a community of 50 homes with locations for a boat dock, fishermen's camps, organizational camps and a possible recreation area for Nellis airmen.—*Las Vegas Review-Journal*.

Halogeton Funds Cut ...

WASHINGTON, D. C.—The Department of Interior's land management bureau had planned to spend \$1,345,000 for halogeton control in the year beginning July 1. The Agriculture Department had earmarked \$31,000 for research in ways to control the noxious weed. But the agriculture appropriations bill eliminated the latter request, and the House substantially cut the land management figure. The bureau hopes to treat 150,000 acres of infested land this year by methods of brush removal, chemical spraying and grass reseeding; but the \$2,000,000 appropriated by Congress for the program last fall will be spent by midsummer.—*Pioche Record*.

Ask Rustling Curbs ...

ELY — Legislation to curb cattle rustling in Nevada has been asked by the livestock committee of the state farm bureau. The bureau's legislative committee will draft and support a bill to be submitted to the 1953 state legislature which would empower three or more inspectors to check the movement of all livestock, dead or alive, and to inspect all permits and clearances issued by county inspectors and law enforcement officers.—*Pioche Record*.

Cruisers Whip Canyon Rapids ...

BOULDER CITY — Two cabin cruisers, the first ever to shoot the Colorado River rapids, arrived at Lake Mead after a 280-mile, three-day run from Lee's Ferry, Arizona. The craft, skippered by Jim Riggs of Grand Junction, Colorado, and Frank Wright of Blanding, Utah, took advantage of high waters from the heavy spring runoff.—*Arizona Republic*.

NEW MEXICO

Reservoirs Hit Capacity ...

SANTA FE—"There is little chance the city will experience another water shortage in the foreseeable future," Ralph Loken of the Public Service Company assured Santa Fe residents. Spring rains and near-normal snowfall on the Santa Fe Canyon watershed have filled the company's reservoir system to capacity. For the first time since drouth struck this section of the Southwest several years ago, water is flowing over the spillways of the dams, and the excess is flowing down the Santa Fe River and through the city. Flash boards have been added to the dams to increase capacity. — *New Mexican*.

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Fight Wet Weekends . . .

WASHINGTON—Rainmaking experiments in New Mexico are spoiling his state's lucrative tourist business and ruining too many Sunday picnics, Michigan Senator Moody complains. He has threatened to get Congress to do something about the weather situation if the Defense Department can't come up with a satisfactory solution. Dr. Irving Langmuir, Nobel Prize-winning scientist, claims he's the one who's been causing the damp weekends with experimental cloud seeding in New Mexico. But the weather bureau scoffs at man controlling the elements with such predictability. Dr. Harry Wexler, the bureau's rain expert, has kept an eye on cloud seeding in the Southwest and associated phenomena for the past year, and reports the results are inconclusive. — *New Mexican*.

Special Deputies Named . . .

GALLUP—Thirty state police officers in New Mexico have been given commissions as deputy special officers of the U. S. Indian Service and have been authorized to handle any law enforcement problems on Indian lands in the state. The new system is expected to facilitate working relations between the state police and the Indian Service in enforcing the law on federal reservations. — *Aztec Printer-Review*.

Meyer Hits School Plan . . .

SANTA FE—It has been estimated 12,000 Indian children in New Mexico and Arizona cannot attend school because of a lack of facilities and teachers. As a solution to the problem, New Mexico and Indian Service officials asked Indian Commissioner Dillon Myer to permit New Mexico school districts enrolling Indian youngsters to submit budgets based on their needs. This would supplement the present procedure of preparing budgets based solely on anticipated funds. Myer admitted the bureau's present program to transfer Indian children to public schools has met with little success in New Mexico, but he sharply rejected the suggested substitute plan. — *New Mexican*.

Anticipate Guests . . .

ROY—The little cowtown of Roy, in the heart of one of the west's greatest Hereford producing regions, is getting ready to play host to the largest guest list in its history. More than 1000 livestock producers from dozens of states are expected in Roy August 26 for the start of the second annual New Mexico Hereford Association Ranch Tour. For one day, the population of Roy will be just about doubled. — *Las Cruces Citizen*.

Hunt Spanish Relics . . .

SANTA FE — Half a dozen men working with picks, shovels and trowels are attempting to fill in a 90-year void in New Mexico history by digging in the vicinity of an ancient Indian village 15 miles northwest of Santa Fe. The excavation is being supervised by Fred Wendorf, research associate of the laboratory of anthropology at the University of New Mexico. Wendorf hopes to unearth enough of the remains of the village of Cuyamunga to give historians a clearer picture of Spanish influence on the Indians during the first 100 years of Spanish occupation. — *Arizona Republic*.

UTAH

Treaty Violated, Says Court . . .

SALT LAKE CITY—Utah's Navajos are bound by an 1886 treaty with the United States in which the tribe relinquished rights to occupied territory outside its reservation, the Utah Supreme Court decided. Livestock men had obtained an injunction against Navajos who were grazing their sheep beyond reservation boundaries in San Juan County. Counsel for the Indians argued the defendants were not bound by the agreement signed by the tribal chiefs in 1886. The court disagreed, concluding the Navajos "have no aboriginal rights in the public domain outside of the established reservation." — *San Juan Record*.

Blanding Tunnel Wet . . .

BLANDING—After 30 years of work on the project, the Blanding Tunnel released 20 second feet of water-flow into Johnson Creek in mid-June. The water is not needed for domestic purposes at present, and is being fed from Johnson Creek into irrigation ditches. Marvin Jones and Douglas Galbraith, who had helped take out the first wheelbarrow loads of dirt in 1921, were present at the brief dam-breaking ceremony. — *San Juan Record*.

FORT DUCHESNE — Harry W. Gilmore, former program officer in the Indian Bureau's Sacramento Area Office in Riverside, California, has replaced Forrest R. Stone as superintendent of Uintah and Ouray Agency, Fort Duchesne. Stone was transferred to the superintendency at Flathead Agency, Dixon, Montana.

Utes Spending New Wealth . . .

VERNAL—The Ute Indian tribe in the Uintah Basin is carrying out its rehabilitation program, initiated after the tribe was awarded approximately \$2,000,000 in oil revenue from lease bonuses. New, modern homes are going up, electric wiring has been underway the past year, 500 Ute children have been transferred to public schools, and education and health programs are being carried out throughout the tribe. Approximately 64,000 acres of fertile but uncultivated land is being cleared, leveled and developed for farming. It has been estimated by tribal officials that the average annual income of a Ute family of four is now more than \$5000. This amount, involving no work, is untold wealth to a people who never before have had adequate food, clothing or housing. — *Vernal Express*.

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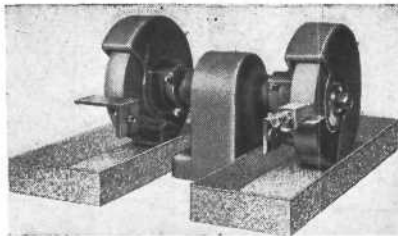
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Amateur Gem Cutter

By LELANDE QUICK, Editor of The Lapidary Journal

The Salem Geological Society of Salem, Oregon, held one of the most unique field trips in history on an April Sunday. They journeyed to Portland and visited most of the public buildings in that city to study the stone from which the buildings were constructed.

They found beautifully matched green and white slabs of serpentine from Vermont; Raymond granite from California; Limestone from Medford, Indiana; red Hillofare granite from Scotland; red and white marble from Italy; Arizona sandstone; pearl granite from Minnesota; agate and carnelian granite from Oregon; rose travertine from Minnesota; galena sienna marble from Italy; Tenino sandstone from Washington; Pavonazza marble from Italy; Colorado Yule marble; lots of tile and many other marbles from many other locations.

This brought back many memories to us for we lived in New York for many years and we were a "stroller," something you rarely find in the west where everyone takes the car to the store a block away and the children are dropped off right at their door by the school bus. But when we lived in the east people took walks for recreation and while the best way to see the world is by horseback, old Shank's mare permits you to see a lot too. We were always interested in the building stone used in the new skyscrapers and we still think that the Woolworth Building is the handsomest structure in all America, and many architects think so too, according to the record. They don't build buildings like the Woolworth building any more, with all marble floors and nothing but mahogany trim and copper window frames. Present costs would not permit it and then we are living in an age of steel, concrete and plastic in which most of the old time stonemasons have disappeared.

Here in California, where our cities did not have any great development until the steel-concrete age came along, it is rare to find a public building anywhere worth a second look. Nowhere in the state is there a building built of stone that could compare remotely with the art museum in Philadelphia or the Lincoln memorial in Washington. We have few stonemasons here for there is little work for them to do and few quarries from which to get native stone. The eastern rockhounds have their field trips by visiting quarries, some of them active for a couple of centuries. Many of the western rockhounds hardly know what a quarry is.

It was our grandfather, about eight times removed, who supplied the building stone to build Trinity Church at the head of Wall Street in New York. According to the record Pieter Kyuk was given a contract to haul the stone by boat from what is now called Governor's Island. In the early days of America all buildings were constructed of stone quarried as close to the site as there was a supply and this scheme is still generally followed where stone is used at all. As a boy we played in a large quarry in Pennsylvania from which the stone was taken to build the present capital of New Jersey at Trenton, directly across the river from our old home. This was about the

nearest spot they could get good stone and it evidently didn't matter to the contractor of 50 years ago that the stone came from another state, as long as the quarry was but a few hundred yards from the building site. Right now there is talk of building a new bank here in Palm Desert and we shall carry on a strong campaign to build it from the marble deposit that can be seen from our window; marble from which one of our pupils made a fine pair of bookends last winter.

Where have the old stone masons gone? Those who still live, particularly in the west, have drifted into other channels of trade. We have a letter from one of them (Harold Clark of Seattle) in which he writes: "In 1936 I was bumming around in the west working at my trade of stonemasonry when I first became interested in rock polishing and you know the rest.

"The contractor was a Scottish stonemason with a monument shop in Phoenix. He was working for peanuts in those days, as we all were, and he supplied me with tobacco and beans to look after his place in Phoenix while he went to Flagstaff to open up his quarry of red sandstone. Fifteen years later I married a Seattle rockhound and I find myself bringing back to mind the secrets long forgotten and half learned, that I picked up in those days. My old trade of stonemasonry is half forgotten. Now I lay firebrick in boilers, glass blocks in factories, ceramic veneer on public buildings and draw \$3.30 an hour as a journeyman bricklayer. The trade I learned in the quarry towns of Massachusetts is past. Spalling hammers, bush hammers, bullsets, bull wedges—I see one once in a while—in a hock shop. Oh how I regret the old patterns, the rubble faced work with accurate spacing of free hand cut stone, the mingling of harmonious colors in seam faced masonry. I recall as a cub the church at Newburyport, Mass. The old stonemason was 70 and was the only man available. 'When I was a lad,' he said, 'there were 50 of us.'"

Mr. Clark has much more to say, in one of the most interesting letters we have ever received, about how he is going to make a fluorescent fireplace in which his old skill as a stonemason can be used, etc. His letter made us a little sad for it breathes the end of an era. In another hundred years any building made of quarried stone is going to be an index of another age and it will be properly revered—and compared to some of the shoddy buildings being built today—if they still stand.

If your club needs a field trip sometime and you don't know where to go why not examine the buildings of your city, or one nearby, with a competent guide? Try to uncover an old time stonemason in your locality who will explain the materials and methods used in the building. Fill your head with useful knowledge and your soul with appreciation of what the former generations left you and make an old man happy. Maybe too it might be smart to have the old fellow make a tombstone for you right now, or you may delay your passing until there is nothing but plastic with fluorescent lettering.

Gems and Minerals

IDAHO MINERAL AREA CHOSEN AS SHOW SITE

Owyhee Gem and Mineral Society of Caldwell, Idaho, will be host this year to the annual gem and mineral show of Northwest Mineralogical Societies Federation, August 23 to 25.

"There is a very good reason for calling Idaho the Gem State," Tom Warren, chairman of exhibits, reminds collectors. "Within the boundaries of Idaho are located some of the best gem and mineral fields in the United States. Rockhounds will find great variety of agate, petrified wood, obsidian, jasper and nodules."

The finest agate areas in the United States are only a short distance from Caldwell. Conducted field trips will be taken to these choice locations during the week of the show. Graveyard Point, where beautiful plume agate is found, and the mine dumps at the ghost town of Silver City, center of the Mother Lode area of Idaho, will be visited. At Beaver Hill collectors will find the finest scenic nodules of any area in the country. Tubular, vein, and fortification agate are also available with a tremendous variety of petrified wood in many different locations.

Another feature of the show will be a Buckaroo barbecue dinner being held this year in place of the annual banquet. Several collections of some of the world's outstanding gems and minerals will be on display in the exhibit hall.

LONG BEACH SOCIETY CHANGES SHOW TO AUGUST

Long Beach Gem and Mineral Society, which originally had announced July 26 and 27 as dates for its annual show, will exhibit August 9 and 10 instead at Sciots Hall, Sixth Street and Alamitos Avenue, Long Beach, California. "Dame Nature's Best Preserved Food," the collection of Mrs. Erna Clark, and Dr. Chan Wen Ti's jade collection will be two of the featured displays. Aiding in arrangements are Grace Kloehn, publicity; George Raymond, raffle; Ida Shuster, reception; Happy Hawkins, commercial exhibits; Marjorie Erdal, club exhibits; Jessie Hardman, special displays; Dr. Gerould Smith, awards, and Mrs. Barnes, refreshments.

GEOLOGY OF CALIFORNIA DESERT AREAS SHOWN

"The entire California desert area is one of interior drainage, characterized by saline lakes and playas and desert climatic conditions," reports the March bulletin of the California Mineral Information Service. The issue contains a detailed outline of California's geologic record, complete with maps and descriptions of the state's eight geomorphic or natural provinces.

In the California desert region, a large number of more or less distinct mountain ranges, with intervening desert plains and basins, trends essentially northwest. The northwest topographic and structural trend is most strikingly developed in the basin ranges east of the Modoc Plateau and east of the Sierra Nevada, exemplified by such structural troughs as Death Valley and such rugged mountain blocks as the Inyo Mountains and the Panamints.

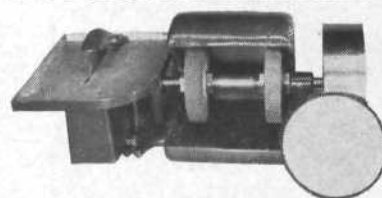
SOUTH BAY SHOW SET IN SEPTEMBER

South Bay Lapidary Society of Manhattan Beach, California, will hold its third annual show September 20 and 21 at Clark Stadium in Hermosa Beach, California. Exhibits ranging from rocks as they are picked up in the field to cut and polished stones, mineral specimens and a fluorescent display are promised visitors. Hours will be from noon to 9 p.m. Saturday and from 10 a.m. to 6 p.m. Sunday.

TEXAS STATE SOCIETY ANNOUNCES NEW OFFICERS

At the annual meeting of the State Mineral Society of Texas, officers and directors were elected for the 1952-53 club year. W. V. Vietti of Houston was named president; Kenneth C. Fry of Houston, vice-president; Hugh Leiper of Austin, secretary-treasurer and editor of *Mineral Hobbyist*.

New directors are Jesse F. Burt of San Antonio; J. E. Casstevens of Fort Worth; J. J. Brown of Austin; J. C. Walter, Houston; Porter Rankin, Midland; L. T. Johnson, Buda; E. A. King, Austin; Harry Simpson, Midland; Fred Mills, Fort Worth; Joe R. Murphy, San Antonio; W. R. Odom, Austin; Robert Peck, Dallas; Mrs. Ruby Renfro, Fort Worth; Miss Millicent Renfro, Fort Worth; Raymond Rock, San Antonio; Mrs. Mildred Spillman, Austin; Mrs. Edith Owens, Marfa; Frank Woodward, Alpine; Bill Curry, San Angelo; W. Oathout, Sanderson; Clay Ledbetter, Waco, and Hugh Leiper, Austin.



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THE **Desert** MAGAZINE
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AMONG THE ROCK HUNTERS

After a joint picnic and swap-fest in Placerville, California, the Eldorado Mineral and Gem Society and Sacramento Mineral Society made a trip to White Rock Canyon for quartz crystals. A number of good specimens were found with inclusions of brookite and octahedrite (anatase). According to the California Division of Mines, this is the only known locality in the state where brookite occurs.

A beginners class in gemology and the sciences of geology, mineralogy and crystallography has replaced the book review program of San Diego Lapidary Society. Instructor is Edward J. Soukup.

An "Introduction to Geology" was presented El Paso Mineral and Gem Society by Dr. William Strain of Texas Western College. He will elaborate on the subject at a future meeting.

A rock auction was held recently by the Yavapai Gem and Mineral Society of Prescott, Arizona. President Ernest E. Michael auctioned off specimens of minerals from the Tiger Mine, crystals from Cathedral Caves, jasper, agate, garnet, obsidian and a beautiful piece of native copper.

Delvers Gem and Mineral Society of Downey, California, reports the road to Quartz Hill in the Argus Mountains of California is in good condition. Passenger cars can travel it with no trouble, and with a little care even the wider new cars can make it without paint damage. On their recent field trip to the area, Delvers found excellent onyx specimens with bands and flecks of green, red, brown or tan.

A panel of experts was on hand to answer questions of San Antonio Rock and Lapidary Society at a meeting in the Veterans of Foreign Wars hall in San Antonio. Herb Ohm, minerals; Frank Woodward, Jr., agate, and R. C. Farquhar shared the task of identifying puzzling specimens.

On the first 1952 field trip for Minnesota Mineral Club, members visited the Rabbit Mine, Manuel Mine and Louise Mine in the Iron-ton district. They gathered good chunks of vein Binghamite and some agate.

After 42 years collecting and selling mineral specimens, W. Scott Lewis has sold his Hollywood, California, business and will concentrate on his natural science slides. Lewis hopes to have the following lectures available by fall: *Copper Minerals Around the World; Minerals Used as Gems and in Ornamental Work; The Natural Science of Death Valley; The Quartz Family Minerals and Volcanoes and Earthquakes.*

Glendale Lapidary and Gem Society played host to 10,000 visitors at its May show in Glendale, California. Speaker at that month's regular meeting was Edward Peoria Baker of Downey, California, who commented on his color slides of native wildflowers, especially those in the San Diego region.

Four basic processes of the lapidary art —sawing, grinding, sanding and polishing —were discussed at a general meeting of Chicago Rocks and Minerals Society. Members were advised to do all their work "wet" and to keep both machinery and stone clean throughout the operation.

NEW SLATE SEATED BY SAN MATEO GROUP

Gem and Mineral Society of San Mateo County, California, unanimously elected the nominating committee's suggested slate of officers. Walter Reinhardt is president; Alice Sharp, vice-president; Dorothy White, secretary, and Burton Stuart, treasurer. Directors are E. A. Schimberg, constitution; Paul Fisher, organization; Madelaine Klose, education; Lloyd Underwood, finance; Francis Marshall, program, and Richard Carpenter, field trips.

Florence Underwood, who interprets gems in music, entertained members at the election meeting. "Surf," a temperamental tone picture of the west coast, represented the fluorescents; "Blue Flute," Miss Underwood's own composition about Hopi ceremonials, called turquoise to mind, and Chinese poems set to music illustrated jade. "Fountains of Acquapaola," with its lyrics, "shimmering lights, as though the Aurora's wild Polar fires flashed in thy happy bubbles, died in foam," suggested opal.

The Chicago Lapidary Club's "How to Do It" series continued with Fred Minuth's discussion, "How to Polish Silver" in the jewelry course and J. L. Cunningham's "How to Make a Gem Collection" in the lapidary course. The club's second annual amateur handcraft, gem and jewelry competitive exhibition was held in May, and winners displayed their work through June at the Chicago Natural History Museum.

Dr. Ben Hur Wilson, in his talk on "Amygdaloids," explained the formation of agate for Marquette Geologists Association. Prof. Frank L. Fleener, second guest speaker of the evening, discussed man's discovery of agate and the gem's talismanic use which has survived until today. Specimens from Prof. Fleener's collection illustrated different types of agates.

Three new books have been added to the library of Hollywood Lapidary Society: *Metalcraft and Jewelry* by Emil F. Kronquist; *Jewelry, Gem Cutting and Metalcraft* by William F. Baxter and *Introductory Gemology* by Webster and Hinton.

Clement Tavares and Hershaw Owen found large jadeite boulders on a Fresno Gem and Mineral Society field trip to Clear Creek, California. They broke the huge rocks, and each member chipped off a good specimen. White and pink jadeite, green chalcedony in agate and blue-green jasper also were collected at the site.

Gem Cutters Guild of Los Angeles, California, invited Victor Arciniega to speak on "The Occurrence of Gem Stones in Pegmatite" at its July meeting.

L. A. LAPIDARY SOCIETY INSTALLS NEW OFFICERS

Los Angeles Lapidary Society installed officers at the June meeting. James Underwood is new president; James Ruddy, first vice-president; Clarence Chittenden, second vice-president; Howard Evans, treasurer; Lillian Gaston, recording secretary, and Mary Humble, corresponding secretary. After installation ceremonies, pictures taken on society field trips were shown.

Santa Monica Gemological Society learned about tile and utility clay products from raw material to finished article when Allan Paul spoke and showed colored motion pictures on the industry. Adobe products from Fort Tejon and San Fernando Mission and local Indian artifacts were on display. New President Harold H. Hagen presided.

Tucson Gem and Mineral Society visited the Washington Camp Mining District and collected specimens of quartz, sphalerite and garnet.

Tucson Howard Hughes Rock Club, newly organized in June, was guest of the Tucson Gem and Mineral Society at a recent meeting. Two films, "California and its Resources" and "Volcanoes in Action" were shown.

June meeting of Western Nebraska Mineral Society was a picnic in Sidney, Nebraska. Members' polished rocks were on display.

Jack Schuenk told of his "Gem Buying Trip to Brazil" at a meeting of Compton Gem and Mineral Club, Compton, California. He showed colored slides and maps to illustrate his remarks.

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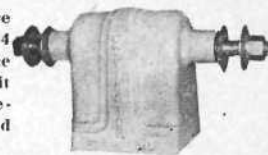
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LARGE WOLLASTONITE DEPOSITS IN CALIFORNIA

Wollastonite (CaSiO_3) is found in cleavable, columnar, fibrous, and compact white to gray masses, chiefly as a contact mineral in crystalline limestones near or at the contact with igneous rock. It is formed by the action of silicic acid on the limestone at a relatively low temperature. Common associates are lime garnet, epidote, and diopside. It has good pseudo-prismatic cleavage, a hardness of $4\frac{1}{2}$ to 5, a specific gravity of 2.8, and crystallizes in the triclinic system. Some wollastonite resembles tremolite so that optical tests may be necessary to distinguish one from the other.

Large deposits of wollastonite occur in California in the Panamint Range northwest of Warm Springs, Inyo County, and in the Rademacher district near Randsburg, Kern County. Wollastonite also occurs as one of the contact minerals in the Crestmore quarry, Riverside County.—*California Mineral Information Service.*

"A Collector's Guide to Michigan" is the title of the summer issue of *Gritzer's Geode*, published in Mesa, Arizona. The mineral survey describes gems and minerals of the Wolverine state, locates collecting areas, lists public mineral displays and suggests publications which might be valuable to the rock collector visiting Michigan.

Long Beach Mineral and Gem Society members hoped to find good specimens of barite, dolomite and Drusy quartz on a field trip to Palo Verde, California.

Mrs. Evan C. Lewis of Topeka, Kansas, spoke to the Oklahoma Mineral and Gem Society, Oklahoma City, on "Indians of the Southwest and Their Crafts." Mrs. Lewis, a special representative of Santa Fe Railway, has traveled extensively throughout the Southwest during the last 15 years. She displayed her collection of Indian turquoise and silver jewelry.

The new geology class of the Northern California Mineral Society, San Francisco, held its first meeting in May. More than 20 members attend the class, taught by James Old.

"History of the Glacial Great Lakes" was the topic of J. Harlan Bretz of the University of Chicago geology department when he spoke before an audience of Marquette Geologists at the Chicago Academy of Science. Mr. Bretz paid special attention to formations in the Chicago region.

SOUTHWEST MINERALOGISTS ELECT JIM HALL PRESIDENT

Elected unanimously to lead Southwest Mineralogists through the coming year were Jim Hall, president; Herman Hodges, vice-president; Mrs. Ruth Bailey, recording secretary; Mrs. Stella Hodges, corresponding secretary; Mrs. Cora Standridge, treasurer, and Jack Craig, Jack Lasley and Lewis C. Sears, directors. Trustees are John Akers, Mrs. Dorothy Craig, A. C. Gustafson, James Ruddy, Walter S. Shirey and Frank Trombatore.

Summer event of the year for the Mineralogical Society of Southern California is the annual picnic. This year the members gathered in Pasadena's Tournament Park for an outdoor supper and rock auction.

One of the new features introduced at meetings of the Michigan Mineralogical Society is a mineral exhibit case. Here members display their most unusual specimens for study and discussion.

June issue of the *Earth Science News* reports the addition of more than 25 volumes to the library of the Earth Science Club of Northern Illinois. Principal contributors were Conrad Wittenberg and Franklin Wray. Members may borrow books for ten cents a month, magazines for a nickle a month.

Castro Valley Mineral and Gem Society of San Leandro, California, installed Von McBride president at its June meeting. Don Wills is new vice-president; B. E. Sledge, secretary, and P. B. Kyle, treasurer. At the installation meeting, mineral specimens, crystals, cutting material and finished jewelry contributed by members were auctioned. Among the crystals offered for sale was a calcite group weighing almost 100 pounds. It was contributed by Mr. and Mrs. Taylor of Camino, California.

An open-air meeting was scheduled for June by the Wasatch Gem Society of Salt Lake City, Utah. Speaker Frank Christensen planned to tell of his trip to the African diamond fields.

A. L. Robinson and Lew Peck led a field trip group from Fallon Rock and Gem Club to a wonderstone pebble site east of Fallon, Nevada. Geodes and milk opals also were found, and W. G. Pierce discovered an ancient Indian tomahawk in perfect preservation. The club plans another trip to the area to look for Indian relics.

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Fossils Reveal Historical Relations of Rock Foundations

Paleontology is no longer a science confined to textbooks and museums. Although it started many years ago as a study with no goal other than learning for learning's sake, today it has become a practical and valuable tool in the never-ending search for the earth's mineral resources.

Early in the nineteenth century, while supervising work on canal excavations, William Smith, an English surveyor, made detailed notes on the succession and nature of the rocks he encountered. He noticed that fossils found in a certain rock layer were apparently characteristic of that layer in any part of England with which he was familiar. He also observed that the rocks above the layer contained a second and different fossil group, and that the bed below was characterized by still a third aggregation.

After 24 years of observation over the length and breadth of England, Smith published his colored geologic map of England—based partly on his knowledge of fossils—which profoundly influenced the development of geology. The skill with which he was able to predict the kind of rock that would be found in an excavation or tunnel or the depth to which a shaft would have to be sunk in order to reach a coal seam, dramatically proved the economic value of knowing the orderly succession of rock strata.

Since the time of William Smith, much information on the occurrence of fossils and their relative position in rock strata has been recorded. It was early recognized that the older rocks contain the remains of the simpler organic forms while the more recent rocks contain a wider variety of more complex fossil forms.

From this storehouse of information paleontologists have been able to arrange the fossils into chronological order and construct a relative time scale. This geologic calendar, built on fossil successions, related geologic events to one another. For interpreting the geology of the earth such a relative time scale is all that is required, and a consideration of the specific number of years ago that each event took place is of little consequence.

However, spurred on by a curiosity to translate geologic time into years, geo-

physicists have recently succeeded in calibrating the relative time scale in terms of years by measuring the rates of disintegration of radioactive materials.

By dating the rocks of the earth's strata using fossils, the geologist is able to determine the relation of rocks in one area to those in another. Dating and correlating rock formations is essential in the search for petroleum. The petroleum geologist looks for evidence of the age of each layer of sediments to learn when it was deposited, and when it was folded, faulted or eroded. By recognizing fossils characteristic of a certain geologic time in well cores and ditch samples and comparing them with similar marker fossils in neighboring wells, he can take the first step in local correlation and structural interpretation. Using these data he can make geologic maps and cross sections revealing the history of the area and showing the structure of the earth's crust. Such interpretations help the geologist decide whether an exploratory well would be advisable.

Besides indicating the age of enclosing rocks, fossils also provide the means by

which the geologist can delineate the former distribution of land and sea. Old shores lines are very important to the petroleum geologist. Oil has rarely been found except in or near rocks which we deposited in ancient ocean basins, which leads most geologists to believe that oil is formed from the remains of ancient marine animals and plants. Furthermore, a knowledge of the distribution and association of fossil types helps the geologist determine the location of the deep and shallow parts of these former seas. Millions of dollars depend upon the fossil correlations which are made daily by large staffs of specially trained workers in the petroleum industry. — *California Mineral Information Service.*

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By RANDALL HENDERSON

THIS MONTH *Desert Magazine's* staff extends a welcome to a contemporary editor who has turned his back on the big city and come to the desert to make a living. Roy Hoff is the newest member of our Coachella Valley editorial colony. He edits and publishes a magazine for the archery hobbyists. *Archery*, he calls it—with thousands of readers all over the United States. I did not realize what a popular sport this bow and arrow game has become. Incidentally Roy is one of the nation's leading marksmen with bow and arrow.

Roy took over the magazine several years ago as a sort of spare time activity. But it has grown so big he has given up his job as superintendent of one of the big printing plants in Los Angeles, has bought a home in Coachella Valley, and arranged with *Desert* to print his magazine.

With Roy Hoff, Leland Quick of the *Lapidary Journal*, and Harry Oliver of the *Desert Rat Scrapbook* all in this neighborhood, the Palm Desert atmosphere is getting all cluttered up with journalists. And if the Los Angeles folks don't get busy very soon and do something about that smog, we'll have some more of their editors down here before long.

* * *

Recently I visited the Los Angeles office of the Field Placement Service which has been set up by the Indian Bureau to find off-reservation jobs for Indians who wish to escape from the handicaps of life on tribal lands.

In charge of the placement service at 1027 South Broadway in Los Angeles are Alida C. Bowler and Gilbert L. McMillan. Similar offices are located in Salt Lake City, Denver and Chicago. Through the services of these offices 3500 Navajos found employment in agricultural fields last year.

I am completely in accord with this program of the Indian Bureau. For the Navajos, Hopis and other pueblo Indians whose increasing numbers are finding it more and more difficult to make a livelihood on the arid tribal lands assigned to them, it appears impossible that their standard of living ever can be raised until they adapt themselves to off-reservation employment.

According to Miss Bowler, the Indians have the intelligence and industry to fit well into the white man's economic world, and they adapt themselves quickly. Yet it is often true that they become unhappy in an indifferent, alien environment. The ties of tribal custom and religion remain strong. To meet this situation the Indian Placement Service also is seeking to enlist volunteers among the white population who will help the individual Indians and their families to find a place in the cultural life of the communities in which they are working.

* * *

It's fun to live in a world of change—at least it is fun if one keeps mind and muscles flexible enough to adapt

oneself to the changes—which isn't always easy. Just at the moment I am thinking of some of the new words which are creeping into the English language—words which we Southwesterners are borrowing from our Indian and Mexican neighbors. Language, like every other tangible thing in this world, goes through a constant process of evolution, and I think the Spanish and Indian words which are being added to our English vocabulary are making it more expressive and more useful.

When American frontiersmen first came in contact with the plains Indians they adopted the Indian name tepee for the tent-like dwelling in which the Indians lived. More recently the term hogan has been accepted as the name of a Navajo dwelling. Both words are now in the English dictionary.

From Spanish we have acquired many new words for our English vocabulary, especially here in the Southwest—ramada, camino, adios, bisnaga, rodeo, mesa, patio, malpais, bajada, arroyo, sierra—pretty words all of them, if given the Spanish pronunciation.

When Americans first came west, the English language had no word which properly described these dry rocky ravines so characteristic of the semi-arid lands of this region. And so they called it a "wash" which was neither an accurate word nor a pretty word. But the Spaniards had already given a name to this bit of geography—arroyo. Today a writer has the choice of arroyo or wadi, another word meaning the same thing and borrowed from the Arabs of North Africa where the same formations are found.

In older communities language tends to become static and inflexible. Out here on the desert frontier we are busy enriching the English language with a lot of new words which we think are worthy.

* * *

Before this August issue of *Desert* goes to press Cyria and I will be off on a 3000-mile tour of the desert country. I've been told there is some very interesting desert terrain in Eastern Washington and Oregon—and I'll confess I haven't seen it yet. We are going there this summer. Desert highways are not as crowded in summer as are the coastal routes—and that is but one of the advantages of a desert itinerary.

The landscape never becomes monotonous to us. We have a little game we play along the way—guessing the distance to that distant point where the road makes a turn or disappears over the horizon. We have both become pretty fair judges of distance in this land of broad horizons. And we generally have a botany book along so we can discuss the botany and geology—and between times think up new questions for the next month's desert quiz.

Next month I hope to tell about some of the desert country I will have seen for the first time.

Books of the Southwest

WETHERILLS OF KAYENTA SOUTHWESTERN PIONEERS

If all whites had dealt with the Indians as John and Louisa Wade Wetherill did, there would have been few Indian wars and no "century of dishonor."

Louisa was two years old when the Wades' wagon train reached Mancos Valley. There, in the beautiful but grim land of the Navajo, her family and the Wetherills took up farming land. Sixteen years later, in 1896, she became John Wetherill's bride.

Life in the frontier was hard. The young couple's first year of farming was a failure, the entire wheat crop ruined by frost. The second year brought drouth, the third year, rust.

But the Wetherills were hardy people, and soon the farm began to prosper. John found time to take scientific parties to the ancient Indian ruins he discovered while riding the range. Louisa made friends with her Navajo neighbors.

In their hogans, the People spoke with wonder of the Slim Woman of Ojo Alamo. "Asthon Sosi must be one of us," they said. "She could not learn our words so quickly if she were white." Louisa Wetherill — Asthon Sosi — not only knew the Navajo's language, she knew their minds as well. Friend and counselor, it was to her the People turned when they became frightened and confused by the white man's ways.

Traders to the Navajos by Frances Gillmor and Louisa Wade Wetherill, is the story of the Wetherills of Kayenta. In beautiful prose, it tells of the Navajos and their struggles for cultural existence in a world invaded by white civilization. It describes the archeological and geographical explorations of the Wetherill men—discoverers of Rainbow Bridge and of the great ruins of Mesa Verde. It interprets with simplicity the life and beliefs of the People and the scenic wonders of their desert land. It relates the hardships faced by pioneer families in the West.

Originally published in 1934, a second edition of *Traders to the Navajos* was released this year by the University of New Mexico Press. Containing 265 pages, several halftone illustrations and a complete bibliography, it is priced at \$3.50.

NEW FLOWER GUIDE TAKES STUDENT ABOVE TIMBER LINE

Flowers of the Southwest Mountains, by Leslie P. Arnberger with illustrations by Jeanne R. Janish, is the last of a triad of flower field books published by the Southwestern Monuments Association, Santa Fe, New Mexico. *Flowers of the Southwest Deserts* introduced flowers of the hot, dry areas, and *Flowers of the Southwest Mesas* covered common plants of the Pinyon-Juniper woodland area extending from 4500 to 7500 feet in elevation. Now the mountain book takes the flower lover from the Transition Life Zone (about 7000 feet) to away above timber line.

In standard botanical textbooks the plants are arranged in order of their relationship to one another; primitive plants such as ferns are first, and the more highly developed plants such as sunflowers are last. These keys are technical and much too involved for the average amateur to use.

Author Arnberger groups plants according to form and color. When a yellow flower is to be identified, the student turns to the yellow section and leafs through the pages until he comes to a drawing resembling the specimen in question. If all the details in both drawing and text check, the plant or

one of its close relatives has been identified.

The book is not a technical botanical work. "To make it usable for the amateur," Arnberger explains in the introduction, "I have been forced to take shortcuts, disregard several established botanical principles and convert technical terms into understandable everyday language."

The paper-bound booklet contains 112 pages, including a complete index and introductory chapters explaining how to use the key. It is priced at \$1.00.

POET SINGS OF DEEP LOVE FOR DESERT LAND

Born in Colorado in 1882, Paul J. Linsley has spent most of his life in the Southwest. He began writing verse at the age of 13, drawing inspiration from the great outdoors which was the backyard playground to his father's pioneer parsonage. Now, at the age of 70, Poet Linsley has published his first collection in a thin volume entitled *Songs of Shadow and Shining*.

Although few of the poems are specifically about the desert country the collection includes "Grand Canyon," "The Wrecker of Iapah City," "The Fence on the B-K," "To The Palm Desert Art Gallery" and several others of desert inspiration. But even when he writes of the city, Linsley displays a deep appreciation of the wonders of nature and a love of the vast Western solitudes which are his home.

Published by Dorrance and Company. 63 pages. \$2.00.

A new edition has just been published

TRADERS TO THE NAVAJOS

The story of John and Louisa Wetherill

"The desert will take care of you," said Hosteen John Wetherill. "At first it's big and beautiful, but you're afraid of it. Then you begin to see its dangers, and you hate it. Then you learn to overcome its dangers. And the desert is home."

For nearly 50 years John and Louisa Wetherill lived in that great desert region of northern Arizona which is the Navajo reservation. They knew the desert—and they knew the Navajos probably better than any other white people have ever known them.

Out of that rich experience, with the help of Frances Gillmor, there was written "Traders to the Navajos," first published in 1934. The original edition has long been out of print. And now a new edition has been published—a story that is even more significant today than when it first appeared.

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One of the more than 60 colorful Indian dances to be presented this year at the Inter-Tribal Indian Ceremonial in Gallup, New Mexico.

Indian Ceremonial in New Mexico . . .

7NDIANS FROM tribes throughout the Southwest, from Oklahoma and South Dakota will gather in Gallup, New Mexico, August 7 through 10 for the 31st annual Inter-Tribal Indian Ceremonial.

The ceremonial is an exciting event—both for the hundreds of Indians who travel by wagon many miles from isolated reservation homes for the four days of inter-tribal competition and fellowship, and for the white visitor who here has a rare opportunity to see sacred tribal dances and to photograph the Indian in his most colorful ceremonial finery.

The performers will parade through the streets of Gallup each morning and will present ancient interpretations of Indian rites, chants and dances each evening in the outdoor arena. Colorfully-costumed clansmen from 35 different tribes will perform more than 60 tribal dances, to be judged for precision and for adherence to tradition.

Indian athletes will compete in wagon races, tugs-of-

war and other individual sports. To the exhibit halls artists will bring their best paintings, and craftsmen will display examples of weaving, silverwork, jewelry, pottery and baskets and buckskin jackets decorated with fringe and beadwork.

The sand painting demonstration in the main exhibit hall is always popular. Seated on the floor, Navajo medicine men sift colored sands through their fingers to create symbolic designs of brilliant color and delicate detail. Since the Navajo law of creation requires that each painting be destroyed at the end of the day, a new design will be begun each morning.

The Inter-Tribal Ceremonial is an all-Indian show where only authentic Indian activity is allowed. The white man is privileged to view the spectacle but in no way enters into the pageantry.

The ceremonial is a photographer's paradise, and Inter-Tribal officials urge visitors to bring their cameras.